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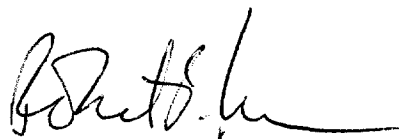
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SUBJECT: Freedom of Information Act Request of Michael Ravnitzky  
Your Case #95-87, Our case #0446-95

The Department of Defense forwarded the enclosed referral from your office to DIA for review and direct response to the requester. It has been determined that document ATI 60776, entitled "German Aircraft Industry-Bremen-Hamburg Area" is releasable in its entirety without restriction to any requester. The document has been provided to Mr. Ravnitzky.

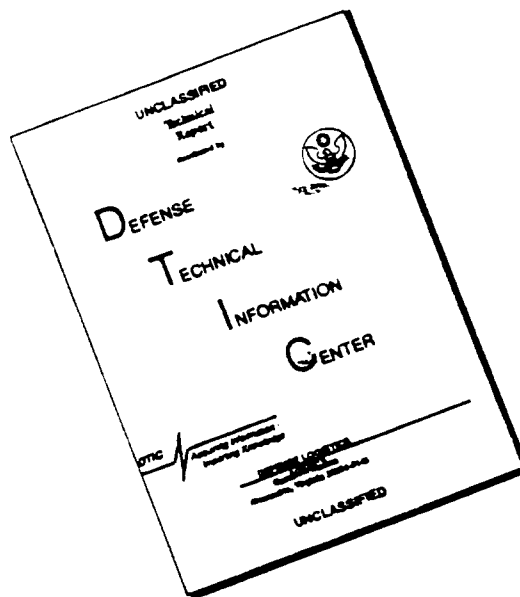
FOR THE DIRECTOR:

1 Enclosure  
DoD memo w/a (U)

  
ROBERT P. RICHARDSON  
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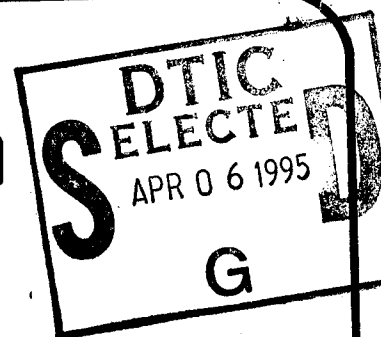
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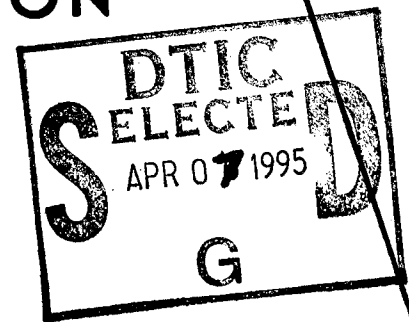
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German Aircraft Industry - Bremen-Hamburg Area - and Appendixes A - C

Shuping, W. A.; Worley, L.; Depew, Jr.; R. H.  
Combined Intelligence Objectives Sub Committee  
(Same)

Unclass. U.S. English 67 photos

An investigating team visited 39 factories, airfields, laboratories, and other installations in the Bremen and Hamburg areas to determine the extent of facilities for the design and manufacture of aircraft. A brief outline of the war-time activities at each of the plants is given with particular attention to any outstanding designs or production techniques employed in this section of the German aircraft industry.

Copies of this report obtainable from CADO.

Military Operations (24)

General (0)

Aircraft industry - Germany (05829.54)

C-2942

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GERMAN AIRCRAFT INDUSTRY  
BREMEN-HAMBURG AREA

9-9-3457

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SUB-COMMITTEE

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**GERMAN AIRCRAFT INDUSTRY  
BREMEN - HAMBURG AREA**

**Reported By**

**W. A. SHUPING, T.I.I.C.  
LEE WORLEY, T.I.I.C.  
RICHARD H. DEPEW JR., T.I.I.C.**

**CIOS Item No.25  
Aircraft**

**COMBINED INTELLIGENCE OBJECTIVES SUB-COMMITTEE  
G-2 Division, SHAEF (Rear) APO 413**

**CONFIDENTIAL**

**REF ID: A61011**



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**Personnel of Team**

<b>W. A. SHUPING</b>	<b>TIIC</b>
<b>LEE WORLEY</b>	<b>TIIC</b>
<b>RICHARD H. DEPEW JR.</b>	<b>TIIC</b>

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Date of Report: June 26, 1945

C.I.O.S. No: 330

Team: W. A. Shuping  
Lee Worley  
Richard H. Depew, Jr.

Target Locations: Bremen and Hamburg areas

Objectives: Focke-Wulf 190  
Weser Flugzeugwerke G.M.B.H.  
Blohm & Voss  
Miscellaneous

Sources of Information:

1. Aero TIIC (40 Berkeley Square)
2. British Air Ministry, London
3. Air P/W Interrogation Unit (2nd T.A.F.)
4. G-2, 29th Division, U.S. Army, Grohn,  
Germany
5. Local Sources

List of Targets Covered:

BREMEN AREA

<u>Coordinate</u>	<u>Location</u>	<u>Name</u>
704953	Neuenland	Airfield
546551	Speckenbüttel	"
538489	Flexen	"
533475	Einswarden	Weser Flugzeug.-factory
591067	Lemwerder	Airfield
513458	Nordenham	Weser Flugzeug.-factory
606745	Heide	Airfield
713956	Neuenland	Focke-Wulf - factory
715970	Hastedt	" " "
593070	Lemwerder	Weser Flugzeug.-factory
774966	Hemelingen	Focke-Wulf - factory
610086	Grohn	" " "
		(Grohner Wandplattenfabrik)
560104	Blumenthal	Weser Flugzeug.-factory
488266	Brake	Carl Funk & Co.- factory

<u>Coordinate</u>	<u>Location</u>	<u>Name</u>
533125	Farge	Weser Flugzeug.-factory
577970	Hoykenkamp	Focke-Achgelis - "
600975	Deich	" " -storage
	Hauserheide	" " -storage
519910	Near Immer	Focke-Wulf ?
593911	Adelheide	Airfield
662957	Huchting	Theodore Klatte-factory
700014	Bremen	Weser Flugzeug.- "
275009	Oldenburg	Airfield
587096	Aumund	Bremer Wandplattenfabrik

#### HAMBURG AREA

493511	Steinwerder	Blohm & Voss - factory
513570	Hamburg	H. Maihak - factory
557559	Hamburg	Bauer & Schaurte-factory
482513	Steinwerder	Blohm & Voss - factory
397519	Finkenwärder	Blohm & Voss - factory
431552	Hamburg	Vereinigte Deutsche Metallwerke-factory
462567	Hamburg-Stellingen	Möller Ochmichen & Co. - factory
488447	Harburg	(Metallwerke Niedersachsen Brinkman & Mergell-factory
"	"	" " " "
360300	Wenzendorf	Airport
532568	Hamburg	Hugo Danger - factory
405526	Altona	Elbeschloss Brewery - factory
301562	Wedel	J.D.Möller Optischewerke
610555	Barsbüttel	Blohm & Voss(Underground)
510615	Fuhlsbüttel	Airfield.

#### Transportation

This team left London Wednesday, May 30, 1945 and was flown by the British to Venlo, Holland. There we obtained transportation from the British Army consisting of two Ford cars with two Belgian Army Privates as drivers. The team departed from Venlo on May 31 and arrived in Bremen, Germany, that night.

## Bremen Area

In this area, this team worked with G-2, 29th Division, U.S. Army based at Grohn, a suburb of Bremen. Captain James A. Love furnished considerable target information including a number of targets on which we had no previous information. For three days an interpreter was furnished in the person of Lieut. Lawrence Brandon of G-2, 29th Division. Through the information and assistance furnished by these two officers, the entire investigation was greatly facilitated, making it possible for this team to investigate 26 targets in a period of one week. Owing to unavailability of the interpreter for the entire period of time at Bremen, this team worked without an interpreter for 4 out of the 7 days spent covering the targets there.

Detailed report on the targets covered in the Bremen area follows.

Coordinate: 610085

Location: Grohn Name: Grohner Wandplattenfabrik

Date Visited: June 1, 1945.

### Interrogated:

Hugo Woldt, Machine foreman, Address:  
165, Mühlenstr., Grohn.  
Worked here 32 years.

Wilhelm Todter, engineer, Address:  
Major Walker Str., Grohn.  
With Focke-Wulf 10 years.

Heinz-Wilhelm Grahlmann, Address: 72  
Major Walker Str., Grohn.  
With Focke-Wulf 9 years, before  
that chemistry teacher in  
high-school.

The purpose of this plant was to test all materials for all Focke-Wulf plants, also all instruments and weapons. This plant was a re-location of similar activities at Sorau and Cottbus. When the Russians approached, Sorau could not be evacuated, but Cottbus was to this location and to Blumenthal.

The material and aluminum testing apparatus, the jigs and fixtures to build planes from Cottous were sent to Blumenthal. Material was also shipped here from Marienburg. 150 employees came with them, partly foreigners. No engineering was done here; all drawings came from Blumenthal.

Owing to uncertainty of the situation these employees stood around, fixed up the shop and re-shipped some parts to other Focke-Wulf factories around Bremen, especially to the Focke-Wulf factory at the Neuenlander Airport at Bremen. No fabrication, no assembly was done here. This plant was operated by Focke-Wulf. The only work ever done here was to unpack and start to take inventory.

There is a large and valuable stock of flight instruments, airplane parts and components and so forth stored here. When visited there was no guard over this facility, but U.S. Army is now guarding plant.

Coordinate: 587096

Location: Aumund    Name: Bremer Wandplattenfabrik  
Date Visited: June 1, 1945

We talked to Gustav Harder. He lives at Bremerstr. 15, Vegesack. He is the director of the Reich-Tire-Stores. We talked also to Ernst Lucke, the foreman who lives on the premises. Weserflugzeugwerke used this location for temporary stores. Nothing of interest here.

Coordinate: 513458

Location: Nordenham    Name: Weser Flugzeugwerke GMBH  
Date Visited: June 2, 1945

Interrogated Otto Bougeras, technical manager of this and other Weser Flugzeug works in vicinity. His address is 1, Fliegerdamm, Nordenham. With the company since 1933.

This company originally licensed to do work for Dornier and Blohm & Voess, worked also since 1944 for Focke-Wulf (fuselages only). Nature of work done here: originally repairs of Flying Boats (at Einswarden plant nearby). Built Dornier DO 18 Flying Boats, also B 138, also one attempt to build one B & V 238 Flying Boat, with 6 engines; never finished, boat hull partly completed is at Einswarden plant, also DO 318 (to replace BV 138 and DO 24) - not completed. The B & V 138 was flying boat for reconnaissance use, the DO 24 was for sea-rescue.

When Admiral Doenitz' program for flying boats ceased, this plant built fuselages for the Fw-190.

No engineering done here. Drawings for the entire plane Fw-190 were said to be available here, but were never produced.

They did use photo-template process.

The R.A.F. - English - inspected plant May, 20, 1945.

No original experiments made here.

This plant built Fw-190 fuselages and assemblies, completed plane here - remaining parts and assemblies being shipped in from other plants. They were taken on the Weser River to flying field at Blexen. The plant actually manufactured fuselages only.

The Fw-190 had a tank of approximately 25 gallons capacity for 50% water and 50% metanol (and alcoholic substance) for injection into the engine for maximum powers. In the case of the Junkers JUMO Model 213 gasoline engine, the injection increased the horse power from normal 1800 h.p. full power to 2050 h.p. This was used in the Fw-190 D-9 and Fw-190 D-13.

Several Fw-190 D-13 airplanes were completed (assemblies), in this vicinity (here or at Einswarden) and were test planes, but never put into combat.



There are large stores of aircraft material and PW-190 parts at this plant.

British T-Force in control here.

Coordinate: 533475

Location: Einswarden Name: Weser-Flugzeugwerke GMBH

Date Visited: June 3, 1945

We talked to Otto Bougeras, also Johann Philipp, Chief of Materials Testing Laboratory at this plant. His address is: Am Markt, 1, Einswarden. With company 9 years, formerly with Junkers.

Philipp was questioned at length on the subject of materials. All standards over which the shop worked were furnished by Focke-Wulf. In the test laboratory a Brinnell hardness tester, which we consider to be superior to those used in the U.S., was tagged for shipment to CIOS Headquarters, London, in the care of Major Avison, 40 Berkeley Square, London. The machine to be shipped is Briniskop 187.5 D.R.P. Auslandspatente D.R.G.M. Brinnelprufing Vickersprufing and it was manufactured apparently by Gustav Reichter, Esslingen Neckar. This piece of equipment is developed to the extent that the use of microscope or any reference to the actual indentation of the ball is not necessary. In place of these methods used in the States, development of this machine includes an oscillograph, this attachment being a part of the machine on eye level with the operator. All attachments and book of instructions are attached to the machine for shipment.

From the stock of material on hand it is evident that there was no serious overall shortage of aluminum or other aircraft material, although various targets visited reported much difficulty with temporary hold-ups on specific items. All raw materials and instruments and other items appeared to be of very high quality.

In the yards of this plant there was the hull, not yet completed, of a 90 tons flying-boat designed by Dr. Richard Vogt, of Blohn & Voss. This was to use 6 engines of 1850 h.p. each.

This facility had 10 or 12 large buildings and was very little damaged by bombing.

When questioned, Bougeras stated that it was his opinion that this was the only aircraft plant above ground in Germany that was not destroyed. We have found that this was not true. He did not think that much of the industry was underground, although he mentioned having heard of the Junkers plant underground near Nordhausen. In this facility were also housed 3 sets of wings and 2 power units for the Arado jet propelled fighter, all badly damaged.

British Task Force guards located here. At date of writing this report, we understand Americans have taken it over.

Coordinate: 533475

Date Visited: June 3, 1945

This target was listed as factory and sea-plane base and is apparently duplication of Weser-Flugzeugwerke GmbH, since Weser-Flugzeugwerke GmbH is located on the Weser River (Sea-plane facilities are available). British Task Force guards located here.

Coordinate: 538489

Location: Blexen Name: Airfield

Date Visited: June 3, 1945

This was the airfield at Blexen. There was in an old hangar one Fw-190 -D-13 airplane, which had apparently been taken to this field for flight test. This plane had apparently been completely assembled, but had been looted. There was nothing of interest at this target. No guards here.

Coordinate: 485265  
Location: Brake Name: Carl Funck & Co.  
Date Visited: June 3, 1945

This was a small factory, which had been making small parts and assemblies for Fw-190. Nothing particular of interest here. No guards. A small stock of materials and parts.

Coordinate: 546551  
Location: Speckenbättel, near Wesermünde  
Name: Airfield Date Visited: June 4, 1945

This target had evidently been used as a repair base and was practically undamaged by bombing. We looked through seven large hangars and also noted 10 to 12 other large buildings, apparently barracks. There were on hand large stocks of supplies, including raw materials, aircraft instruments, electrical instruments, miscellaneous component parts, wire, maintenance material and equipment and large facilities and tools for repair work. There was also noted one Fw-190 airplane with radial BMW engine, one Junkers transport, 2 Heinkel 111, 2 Messerschmitt Me-110 planes and a number of sail-planes in various stages of assembly. Parts of what appeared to be a Blohm & Voss glide bomb model 246, in disassembled condition were also noted.

This target was occupied by an American T-force. It was said that some airplanes were being evacuated by the British, but this is questionable.

There is such a large stock of materials and supplies on hand that it is recommended that guard force be maintained.

Coordinate: 606745  
Location: Heide Name: Airfield  
Date Visited: June 4, 1945

This is a very large airfield with approximately 12-18 large hangars, some in useable condition and some not. The American U. S. Army Engineers are

in control of the field and are rebuilding damaged runways and so forth for use by U.S. Army Airforce. The field was a very large operating base for the Luftwaffe with dispersed and well camouflaged revetments for airplanes, located in the edge of the wood. There were also large numbers of German trucks and other motor vehicles on the field. Investigators noted 1 Fw-190 with BMW radial engine, 3 Junkers Jumo engines, 1 fuselage for a multi-engine aircraft - unidentified, 1 Messerschmitt Me-110, 2 fighters in revetment and several old fuselages for German light (5 or 6 place) cabin airplanes. There is nothing of technical interest here.

Coordinate: 533125

Location: Farge Name: Weser Flugzeugwerke GMBH.  
Date Visited: June 4, 1945

Located near River Weser near terminus of Bremen-Farge railway-line, about 50 m from Farge railway station. Interrogated Kuhlke, whose address is Fargerstr. 101, Farge. This plant made component parts for Fw-190, Messerschmitts, Heinkel and Arado airplanes. Moderate stock of parts and material, some jigs, a large brake and a few other small tools here. No guards at this facility. Not much of technical interest.

Coordinate: 560104

Location: Blumenthal Name: Weser Flugzeugwerke GMBH.

They had in storage 200 Fw-190 fuselages and they were just setting up a small factory. On the upper floors of the building there were quantities of machine-shop tools, lathes, drill presses, presses and so forth. Adjacent to this five story building, an additional building consisting of 1 floor was also being made ready for large machine-shop operations. The equipment for this building was moved into place, but not secured for operation. Quantities of repair and replacement parts were in evidence.

Guards: U.S. Army.

Coordinate: 715970

Location: Hastedt Name: Focke-Wulf Flugzeugwerke  
Date Visited: June 5, 1945

This target is completely destroyed. It covers a large area with many buildings and was evidently one of the principal plants of Focke-Wulf.

We interrogated Wilhelm Wollenhaupt, whose address is 80, Annenstr. Hemelingen, and who was in charge of the plant, with the company for 2 years. He stated that this plant was heavily damaged by bombing on October 12, 1944, and again on April 22, 1945, after which the work was moved to Hemelingen.

We noted the wreckage of many Fw-190's in course of production, also 2 power plants (badly damaged) which appeared to be jet motors, also a damaged fuselage for a 2 engine airplane, unidentified. There were a large number of wings for the Fw-190, which apparently were undamaged. There were no guards at this facility. It is felt that security measures should be taken in connection with the 2 jet engines.

Coordinate: 774966

Location: Hemelingen. Name: Focke-Wulf Factory  
Date Visited: June 5, 1945

Here we interrogated Hans Schubert, whose address is Schwachhauser Ring 84, Bremen. He was the general production manager and with the company 12 years, and a very intelligent individual. This was a moderately large plant and built parts for the Fw-190, including ailerons, elevators, rudders, flaps, etc. These parts to be used both for production of new planes and in the repair of damaged ones. This plant had been badly damaged by bombing, but was at present partly operating, making kitchen ware from the stock on hand of aluminum sheets and also from certain fabricated aluminum airplane parts. Schubert was very cooperative.

Col. Boatner, U.S. Army Air Corps, working with the strategic bombing survey had already visited this plant.

Mr. Schubert stated that no more aircraft operation is going on at Schaumburger School, that at the F.W. plant in Bad Eilsen there was nothing and that all drawings, papers and technical papers had been taken to London by the English Army.

He informed us that there was no F.W. plant at Mittel-Huchting, but that a man by the name of Klatte was making exhaust tubes, cowlings and so forth for aircraft at that location. We later confirmed this fact. See Theodore Klatte, page 16.

He also stated that the operations at Koykenkamp had been moved.

Coordinate: 704953  
Location: Neuenland Name: Airfield  
Date Visited: June 5, 1945

Known as Neuenlander Airfield. This is the civil airport for the City of Bremen. There were about 10 hangars at this field and an administration building, mostly badly bombed. Field now being operated by U. S. Army Air Force. Observed 1 small side by side Bucker sport-plane, with 4 cylinder inverted inline air-cooled engine, used for primary training for fighter pilots. Nothing of technical interest here.

Coordinate: 713956  
Location: Neuenland Name: Focke-Wulf Factory  
Date Visited: June 5, 1945

Focke-Wulf Factory for manufacture and repair, immediately adjacent to Neuenlander Airfield.

This facility was entirely destroyed by bombing. We noted parts including many wings and tail surfaces in the wreckage.

Outside of the buildings and lying on the ground we noted 4 large wings constructed entirely of wood, having a span of about 54 feet and built in one piece. The construction was very rugged and we could walk all over the wing surface without any noticeable deflection. The workmanship was extremely fine. We were unable to identify the wings, but believe from previous information that they are for the TA-152 airplane (Focke-Wulf).

There was nothing else of interest here.

Location: Huchting Coordinate: 662957  
(or Mittel-Huchting) Name: Theodore Klatte  
Date Visited: June 5, 1945

This facility had been reported as Focke-Achgelis, manufacturing helicopters. However, this was an error.

Interrogated Theodore Klatte. This facility made parts for Focke-Wulf, Heinkel, Junkers, BMW, Blohm & Voss. Among parts manufactured were exhaust manifolds; also we saw sheet metal parts manufactured here for jet engines for Junkers model 004 and Messerschmitt Me-262.

At present there are a few men working here manufacturing metal tables and cabinets. The facility is entirely undamaged by bombing. There are no guards. This facility apparently has a permit from the Military Government to continue small peace time operation of metal furniture.

Coordinate: 593911  
Location: Adelheide Name: Airfield  
Date Visited: June 5, 1945

This is a very large, well equipped airfield, 5 km south of Delmenhorst, with many large permanent hangars and works. It is at present under control of the Canadian Army and is also being used as a refugee center for Russians. There is nothing of technical interest here.

Coordinate: 519910  
Location: Near Immer Name: Focke-Wulf ?  
Date Visited: June 6, 1945

It was reported that there might presumably be a Focke-Wulf underground factory southwest of Delmenhorst at the approximate location of Immer. Careful search and enquiries from numerous individuals failed to disclose any such plant. This team has made similar enquiries about such a plant from several former employees of Focke-Wulf and Weser Flugzeugwerke, all of whom denied any knowledge of the existence of such a plant in this area. A local resident near Immer mentioned the possibility of an underground ammunition dump, but this statement was very vague. Owing to the very low altitude of the terrain, it is considered highly improbable that there is any underground factory in this area.

Coordinate: 577970  
Location: Hoykenkamp Name: Focke-Achgelis  
Date Visited: June 5, 1945

Interrogated Fritz Klünner, whose address is 15, Gr.Kirchstr. Delmenhorst (foreman) and Daniel Horstmann, Hoykenkamp (caretaker).

The manufacture of Focke-Achgelis helicopters was formerly done at this plant, but the activity was discontinued in 1942 and moved to Berlin and Laupheim/Bavaria. There were one small and one larger model. Since that time this plant has manufactured airplane parts for Focke-Wulf and Weser Flugzeugwerke.

The one thing of interest here was the very excellent welding of magnesium sheets (or Elektron). It was stated that this was done by hand with an oxy-acetylen torch. Samples of this work and also of two different kinds of flux and welding rods were secured.



Coordinate: 600275  
Location: Deich Hauserheide Name: Focke-Achgelis -  
Date Visited: June 5, 1945 Storage

Located approximately 2 km north of Delmenhorst and about 1 km from Target T-6.

This is a brickyard. Stored in a brick-kiln and in one of the other buildings was a small amount of machine tools - lathes, drill presses and so forth, formerly used in the operations of Focke-Wulf and Focke-Achgelis.

Under a shed we noted a number of very large aircraft self-sealing fuel tanks. There was nothing of technical interest here.

Coordinate: 700014  
Location: Bremen Name: Weser Flugzeugwerke GMBH.  
Date Visited: June 6, 1945

Interrogated Harold Rudloff, formerly chief of protection forces of this plant. His address is: 186, Georg-Gröning Str., Bremen, and he has been with this company for 10 years. He was reasonably cooperative.

This facility was a very large factory with 10 very large buildings. Had been the principal plant of Weser Flugzeugwerke during the past 9 months and had suffered five very heavy bombings and is now completely destroyed. Formerly manufactured parts for Junkers Ju-87, Focke-Wulf Fw-190 and a little for the Me-290.

They were also working on a very large 6 engine plane. Hull jig was still intact and was approximately 90 feet long. There were also noted some Fw-190 fuselage parts in here.

An interesting sidelight is the fact that though the buildings had been almost completely destroyed there were many small pillboxes, cylindrical

in shape with walls made of brick only 50 cm thick, which withstood all bombings.

Nothing of technical interest here.

Coordinate: 275009  
Location: Oldenburg Name: Airfield  
Date Visited: June 6, 1945

Airfield located approximately 5 km northwest of Oldenburg.

Under control of Canadian Army. This was a large airfield with numerous large hangars, was now being used as truck base and repair shop by Canadian Army. Several wrecked Fw-190 and Junkers planes.

Nothing of technical interest here.

Coordinate: 593070  
Location: Lemwerder Name: Weser Flugzeugwerke GMBH  
Date Visited: June 6, 1945

This is a very large factory with 6 or 8 large assembly buildings and numerous similar sheds and so forth. Was one of the principal factories of Weser Flugzeugwerke. The buildings are of excellent modern construction and the installation very complete. This facility is comparatively undamaged. It is under control of the U.S. Army. No personnel of Weser Flugzeugwerke on hand.

At these facilities there are large stocks of raw materials, instruments, aircraft parts, maintenance supplies and so forth.

The work done at this plant was the assembly of Fw-190 and Junkers airplanes. The stock of standard parts including bar stock, sheet stock, engine repair parts and so forth, is very complete.

There were several incomplete Fw-190 airplanes plus component parts and a number of wings for Junkers planes here.

The capacity of this facility must have been large. Nothing important of technical interest here.

Coordinate: 591067  
Location: Lemwerder Name: Airfield  
Date Visited: June 6, 1945

This adjoins Weser Flugzeug Factory Target C-8 and is a moderate size field. One or two damaged F.W. airplanes noted in revetment. Nothing of interest.

In this area the team had the assistance of F/Lt. E.A. Littlefield, R.A.F., who is attached to AP/WIU, 2nd T.A.F. Main B.L.A. F/Lt. Littlefield acted as interpreter and also he and his assistants were of great help in inventorying and helping with the packing of documents at Blohm & Voss.

Detailed report on the targets covered in the Hamburg area follows.

Coordinate: 360300  
Location: Wenzendorf Name: Airfield  
Date Visited: June 9, 1945

Hangars at this airfield had been very badly damaged by bombing with five very large hangars completely destroyed.

Among the aeronautical material noted there was included: on the scrap heap one Messerschmitt Me-262 fuselage (this is the single seater fighter propelled by 2 jet engines) and three Me-262 fuselages which had been converted into two seaters for the training of pilots in the flying of jet propelled aircraft, also two Me-109 fuselages.

In one of the completely wrecked hangars was observed one complete tail unit for Me-262, including stabilizer, elevator, tabs, fin and rudder.

On the field we also observed a wrecked jet engine and a Blohm & Voss BV-141 assymmetrical reconnaissance plane.

In one completely wrecked hangar we observed a quantity of approximately 38 wrecked planes in various stages of assembly, including Me-262's and Me-109's. No Me-262's were seen with jet engines installed.

The British are in charge of this airfield.

Air Ministry reports in London had given indications of underground operations at this location. However, it was determined that the only underground operation was the power plant to operate this base.

Location: Harburg      Coordinate: 488447  
Name: Metallwerke Niedersachsen  
                                 Brinkman & Mergell  
Date Visited: June 9, 1945

Several large buildings considerably damaged by bombing. Some large sheet metal machinery, including presses, etc. Facilities for electric welding, also material testing laboratory. We observed here an extremely good instrument for computing angles on castings, forgings and so forth.

In yard there were 8 fuselages for Junkers Ju-386.

This target was being guarded by the British.

Target visited on June 9th is a part of and adjacent to target mentioned above, which consists of 3 large machine shop rooms, fully equipped with excellent equipment, which had been previously transferred from the target mentioned above due to bombing. This target was not guarded.

Coordinate: 405526  
Location: Altona (Teufelsbrücke). Name: Miberschloss  
Brewery  
Date Visited: June 10, 1945

Underground, in the cellars of this brewery were two machine shops which had been operated by Blohm & Voss for the manufacture of parts. These shops were still intact. In additional underground rooms adjacent, there had been stored a large amount of very fine flight test and laboratory instruments of the highest quality, including two tension and compression testing machines similar to the Olsen. All of this laboratory and test equipment had been severely damaged, evidently by looters or possibly slave labor. Valuable equipment was broken and strewn about in great disorder.

At this target had also been located the design office of Dr. Richard Vogt, moved from Finkenwärder, as a protection against bombing. This office was now a British Officers Mess. British troops were in control of this target.

Coordinate: 493511  
Location: Steinwerder Name: Blohm & Voss  
Date Visited: June 11, 1945

This was the main aircraft production factory for Blohm & Voss. One large building was completely destroyed by bombing; the adjacent building very badly damaged. However, it housed a reasonable amount of raw material and in one section of the building a very nicely equipped machine shop was intact.

We noted at a dock adjacent to this factory, a new, almost completed, 35,000-ton steamship being built by Blohm & Voss for the Hamburg-Amerika Line. It was to have been the fastest liner on the Atlantic and among other features had retractable funnels (smoke stacks). It had been severely damaged by bombing.

Coordinate: 469510

Location: Steinwerder

Date Visited: June 11, 1945

Information from Air Ministry files indicated a possible aircraft target at this location. However, investigations by this team proved that this was not an aircraft target, but was a naval stores and repair shop for torpedoes and also U-boats wireless base. No aircraft material here.

Since this proved not to be an aircraft target it was not listed in the list of targets covered earlier in this report.

Coordinate: 557559

Location: Hamburg

Name: Bauer & Schaurte

Date Visited: June 13, 1945

This target had been listed as manufacturing precision instruments. It was therefore felt that the products might include aircraft activities.

This Company manufactured thread grinders and automatic screw machines. This plant was equipped with a great deal of very fine machinery and had a large amount of their products on hand in perfect condition. Employees told this team that they would shortly be compelled to move everything out.

Coordinate: 610555

Location: Near Barsbüttel Name: Blohm & Voss

Date Visited: June 13, 1945

This facility was located in the Reichs-autobahn tunnel near Barsbüttel. Both ends of the tunnel had been walled off, thus forming an excellent underground machine shop, including three large rooms. The machine shop was well equipped with usual machine tools and also evidently a portion of it had been used as a welding shop. Construction was of brick

and concrete and the shop was well lighted and ventilated. At this time there was nothing of interest here. British troops are using this facility as a R.E.M.E.

Coordinate: 532568  
Location: Hamburg Name: Hugo Danger Kom. Ges.  
Machinenfabrik  
Date Visited: June 13, 1945

Made parts for Junkers, Heinkel and Blohm & Voss. Also made repair parts for bakery equipment, which was their regular pre-war business.

Bombed out and almost entirely wrecked July 1943. Noted a few old rusted jigs, several old rusted engine mounts of novel design for Blohm & Voss. Nothing of real interest here.

Coordinate: 513570  
Location: Hamburg Name: H. Maihak  
Date Visited: June 13, 1945

Interrogated Dr. Werner Zinck, purchasing agent and Karl Munzer. Excellent plant entirely undamaged. Office now operating. This firm has been in business for 55 years. Up to 1943 they made fuel pumps for aircraft. Since then, no aircraft work except light metal castings for aircraft fuel pumps.

This facility includes a small light metal foundry, mostly sand castings and a small amount of permanent mold work. Castings appeared to be of excellent quality. Nothing of special interest here. No guards.

Coordinate: 462567  
Location: Hamburg-Stellingen Name: Möller  
Oehmichen & Co.  
Date Visited: June 13, 1945

Interrogated Richard Oehmichen and Ernst Samptleben, co-proprietors. In business for 50 yrs.

This is a small plant manufacturing barometers and hygrometers for home use. The only aircraft material that was manufactured here during the war was small aneroid bellows used by Junkers to regulate flow of gasoline to the engine at altitudes. No aircraft interest here.

Coordinate: 431552  
Location: Hamburg Name: Vereinigte Deutsche  
Metallwerke  
Date Visited: June 13, 1945

In 1943 almost all of this activity moved to Silesia. They had been making variable pitch propellers and also in 1941 landing gears. Now these premises are occupied by various small companies, only two of which have had any aircraft work. We inspected these two activities as set forth below.

Pressmetall G.M.B.H. (Subsidiary of V.D.M.)  
Interrogated Walter Rohde, general manager, whose address is Grossflottbek Landpaken 31, Hamburg, and Else Mirbach, a secretary, who acted as interpreter. In latter part of the war this company was making worm gears, pressed and punched parts for aircraft. There were on hand several experimental metal propeller blades and hubs, but no evidence of recent production of same.

Leichtmetallbau Wilhem Schultze. Here, we interrogated Robert Schmid, manager of the Hamburg plant. This company was making pilot's cockpit enclosures for Blohm & Voss, used for the conversion of the Messerschmitt Me-109 into a 2-seater trainer. They also manufactured aluminum gasoline tanks for Blohm & Voss. Both of the above facilities at this target had very good machine tool and general shop equipment.

Coordinate: 301502  
Location: Wedel Name: J.D.Möller Optischewerke  
Date Visited: June 15, 1945

Previous information indicated the possible  
sence of an aircraft instrument factory at this



location. Investigation proved that this was not the case. However, there is at this location a most interesting optical instrument factory, which this team inspected. It manufactures very fine optical devices, including range finders, binoculars, microscopes, etc. This plant contains much very fine precision equipment for optical instrument manufacture, as well as complete laboratories.

In the basement of one of the buildings, there is a special laboratory containing some superfine equipment used for making grids dividing the inch into 100,000 parts. This machine is floating on oil, enclosed in a small room with triple walls to insulate from shock, atmospheric changes and dust and is viewed from a telescope device. The grids produced are used in connection with astronomical observations and calculations. This Company has been working on this device for 7 years.

The Major in charge of British troops at this facility, stated that very shortly all machinery and equipment was to be removed. While this team has only superficial knowledge of optical equipment, realizing the possible value of the special precision equipment mentioned above, this information was passed on to TIIC Investigator, C.B.Horsley, who investigated this target and secured a sample of one of the grids. This team recommends that the existence of the above mentioned equipment be further brought to the attention of those interested before possible evacuation ruins it.

Coordinate: 510615

Location: Fuhlsbüttel      Name: Airfield

Date Visited: June 10 & 16, 1945

This is the Hamburg Civil Airport, but now occupied by the British R.A.F. and used by British and Americans for military transport purposes.

The following aeronautical material was observed here: One Fieseler "Storch" in good condition repainted with British R.A.F. insignia. One 2-engine

German light transport, make unknown, powered with 2 8-cylinder inverted Vee engines, but of no technical interest. On scrap heap, several wrecked and partially wrecked Me-109's.

Field Investigation Report No.15 of Air P/W Interrogation Unit (2nd T.A.F.) indicated that certain documents removed from the plant of Blohm & Voss at Finkenwärder were being traced, and later information indicated that 17 cases of such documents had been recovered by the British and were stored at an airfield near Hamburg. At Fuhlsbüttel Airfield, this team found the above mentioned documents in 26 cases. At the request of this team, arrangements were made through Wing Commr. Abrahams, R.A.F., C/O at Fuhlsbüttel, for the removal of these documents, for study and evaluation, to the plant of Blohm & Voss at Finkenwärder. This removal was accomplished this day by Captain S. Greenberg C/O of British troops at Finkenwärder. Captain Greenberg and his staff were very helpful to this team in furnishing transportation to certain targets and in connection with the arrangements for evacuating material and documents to the U.K.

(25/3)      Coordinate: 397519  
Location: Finkenwärder      Name: Blohm & Voss  
Date Visited: June 9, 11, 14, 15 & 16, 1945

This was the experimental aircraft factory for Blohm & Voss. The only aircraft ever built at this location on a production basis were 13 Blohm & Voss Model 222 45-ton flying boats. This was a large and exceptionally well equipped engineering and experimental plant, including a large administrative, engineering and laboratory building, two other very large experimental manufacturing shops and a large hangar. The engineering and laboratory building included a small wind tunnel, small smoke tunnel, facilities for static testing of aircraft components, materials testing laboratory, and very large quarters for engineering. There was also on hand at this facility a very large amount of excellent inspection equipment. This facility is located immediately on the Elbe River, permitting the flight of seaplanes.

This facility was undamaged by bombing, except for a great deal of glass blown out due to bombing of nearby submarine pens.

The more recent activities carried out at this plant which are of interest for the purposes of this report include:

The design and experimental manufacture of the following projects:

- B & V Model 155 High Altitude Fighter
- B & V Model 222 Flying-boat of 45 metric tons gross weight.
- B & V Model 238 Flying-boat of 90 metric tons gross weight.
- B & V Model 246 Glide Bomb
- B & V Model L-10 Torpedo
- B & V Model L-11 Torpedo
- B & V Model 212 Jet Propelled Fighter (Project only)
- B & V Model 215 Twin Jet Fighter (Project only)

This facility also was modifying some Messerschmitt Me-109 single seater fighters into 2-seater trainers for fighter pilots.

Of the above Blohm & Voss projects, this team saw in various stages of construction the Models 155, 222, 238 and 246.

Working from this plant as a focal point a great deal of information and material was got together by this team for evacuation to the U.K. This is set forth in detail further on in this report.

The following key personnel of Blohm & Voss aircraft activities were interrogated during the period of time spent in the Hamburg area:

Dr. Ing. Richard Vogt, Director in charge of aircraft experimental station, whose address is: Hamburg 20, Insel Str. 2. Speaks fluent English, also French and Japanese. One of the leading aircraft designers in Germany, in charge of aircraft design for Blohm & Voss for about 12 years. Prior to this, spent 11 years in Japan, helping to organize the Japanese aircraft industry, during which time he designed a number of Japanese aircraft.

Dr. Herman Pohlman, assistant to Dr. Vogt, and chief of drawing department. Address: Hamburg, Blunkeress, Weidigen Str. 26. Designer of Junkers Ju-87 dive bomber, prior to coming to Blohm & Voss. He speaks English, having been shot down over England where he was prisoner of war.

Arnold Schwinke, Factory Manager. Finkenwärder.

Richard Schubert, Chief of Aeronautics section. Address: Hamburg, Hochkamp, Draste Heilshoff Str. 6.

Karl Scherer, Chief of Flight Test. Address: Hamburg, Niensledter Söbendiekens.

Esinhard Papell, Chief of Stress Department. Address: Hamburg 20, Eppendorfer Baum 12.

Karl Schrawogel, Chief of Test Lab. Address: Hamburg 30, Gibenstr. 36.

Heinz Hedler, in charge of drawing files. Address: Finkenwärder, Emden Str. 19.

Georg Haag, Chief of Wing Structure Design. Address: Hamburg 39, Olstercorferstrbe 110. This man speaks excellent English, having worked for a total of 7 years with various Aircraft Companies in the U.S., including Fokker, General Aviation Corporation and Fairchild Aircraft Corporation.

From personal observation and from interrogation of the above personnel, this team secured the following information about the projects listed.

B & V 155 High Altitude Fighter. For security reasons the German Air Ministry adopted the procedure of using more than one model designation for the same aircraft. The B & V 155 high altitude fighter was also known as the B-15 and as the 8-155 (the latter designation being used in drawings).

In 1943 Messerschmitt offered the German Air Ministry a high altitude fighter with a designation MT-155, but received no order. Later, B & V was furnished with a sketch of this Messerschmitt aircraft, but after study changed it completely in evolving the B & V-155.

This aircraft is a single engine high altitude fighter with a design ceiling of 18,000 meters (52480 ft.). The calculated speed at ceiling was 750 km/hr (470 mph.). The engine was a Daimler-Benz 603 U and exhaust pipes passed down each side of the fuselage and drove a 2-stage turbo supercharger made by Hirth of Stuttgart. The air from the 2-stage turbo supercharger passed through intercoolers to the engine driven supercharger and thence to the engine. In the 155 B seen by this team, these intercoolers were located one at each end of the center section. In the later model, 155-C, of which we saw the Mock-up, the intercooler was located under the fuselage beneath and to the rear of the engine. The cabin was pressurized to 7000 meters. An ingenious inflated tube sealed the sliding hatch cover to maintain the cabin pressure.

The length of the airplane was approximately 11 meters and the span approximately  $19\frac{1}{2}$  meters, the span of the center section being about 10 meters.

Dr. Vogt stated that he believed the wing of this aircraft was possibly the first German wing with laminar flow.

Flaps of split types were used on the center section. The center section used a single box spar of welded steel construction (125,000 p.s.i. normalized). The outer wing panels were of monospar construction.

The range was about 3 hours.

The armament consists of one 30-mm cannon in fuselage, firing through propeller hub, plus 2 20-mm cannon located one in each side of the center section. In the 155-C it was proposed to use 1 30-mm and 4 20-mm cannon.

It was stated by Dr. Vogt that one B & V 155 airplane had been completed and flown away to another location, but was crashed in landing near Neuminster, whereupon it was removed to a Lufthansa field. The crash was attributed to failure of the retractable landing gear to extend.

The second B & V 155 B fighter was nearly completed ready for final assembly and this aircraft and one spare engine, has been secured and tagged for evacuation to the U.K. by this team. Also, we have secured, packed and marked for shipment to the U.K., all original drawings, stress data, wind tunnel data, static test data, what flight test data was available, parts list, etc. for this airplane. This information is set forth more in detail in Appendices A, B and C to this report.

Information on other firms furnishing aircraft components ("Purchased Parts") to Blohm & Voss for their various models, is contained in Appendix D to this report.

B & V 222 Flying Boat - 45 metric tons. This large 6-engine flying boat had a gross weight of 45 metric tons. Before the war two were built for Lufthansa. Subsequently a total of 13 were built. Some were used for the transport of torpedoes between Hamburg and Norway and later as transports in Italy and Africa.

This aircraft was powered with 6 BMW-323 engines of about 1100 h.p. each. Later these were changed to Junkers diesel engines of about the same h.p.

An interesting feature is the 5 small steps on bottom of hull, each about 1" high and spaced about 2½' apart aft of the main step. It is claimed that this relieved suction and improved take-off.

Full engineering information including drawings, reports and other technical data were secured by this team, boxed and marked for evacuation to the U.K.

One hull nearly completed is at this plant and was inspected by this team.

B & V 238 Flying Boat - 90 metric tons. This is an extremely large flying boat said to have been the largest in the world when started. It was

originally designed for the use of Lufthansa. One was completed and successfully flown in 1943, with a gross weight of 87 metric tons. It was later destroyed by Allied fighter pilots.

This aircraft was powered with 6 engine BMW-603 which rate at 2000 h.p. but were said to have been developing only 1650 h.p. each.

The hull for the second machine is at present partially finished in the jigs at this plant. It was inspected by this team, and is most interesting as an excellent example of very large aircraft construction.

This team secured, boxed and marked for shipment to the U.K. complete drawings, reports and other engineering data on this aircraft, as set forth in detail in Appendix B and C to this report. A second set of drawings on the B & V 238 were said to be stored in a silo near Magdeburg. Steps have been taken to recover these drawings and hold them for the present at Finkenwrder under custody of Captain S. Greenberg.

B & V 246 Glide Bomb (also known as B-4 and B-24). This is a glide bomb for release ~~from~~ aircraft. It has a gliding angle of about 1:26. The wing has a very high aspect ratio and is made of solid laminated steel plates, the whole wing then being faired by molding in plaster of Paris to give airfoil section. The weight of the bomb was 500 kg. It has been flown experimentally, but has never been used operationally. The wing loading was remarkably high, each wing having a length of about 10-ft, with maximum chord of about 11-inches, tapering to about 6 inches.

Directionally the bomb was controlled by a gyro hooked up to the rudder. There was no longitudinal or lateral control.

Drawings and other engineering information were secured, boxed and marked for evacuation to the U.K.

One of these bombs, complete except for war head, was inspected by this team, but not tagged as it is understood that a Naval investigating team has already secured three for study.

B & V L-10 and L-11 Torpedoes. Experiments were made with a torpedo equipped with wings to be launched from aircraft and known as model L-10. Further refining and redesign resulted in Model L-11 which was essentially a glider released from an airplane and containing a torpedo which subsequently was released from the glider by means of a trailing device actuated by contact with the water.

A model of the L-11 torpedo, engineering data and calculations for the L-10 and L-11 are included in materials secured by this team, boxed and marked for evacuation to the U.K.

B & V 212 Jet Propelled Fighter (Project only). Also known as 211 and 213. About the end of 1944, Dr. Vogt submitted some designs to the Air Ministry for a single seater single jet fighter, but received no order.

B & V 215 3-seater 2 Jet Fighter. Following up some work on the project of the 212 single seat single jet fighter, Blohm and Voss did some work on a 3-seater to use 2 jet engines (Hirth), known by them as a bad weather and night fighter. The competition for such design was won by Blohm & Voss and they got a verbal order, but it never materialized further.

All available engineering information on the above models B & V 212 and B & V 215 Jet Fighters, as well as information on the Hirth jet engines is contained in data secured by this team, boxed and marked for shipment to the U.K.

Material and Documents Secured for Shipment.

There was secured and marked for shipment to the U.K., one B & V 155 High Altitude airplane not assembled, one spare engine for B & V 155, and 50 boxes



of drawings, engineering data, reports, etc., and Brinnell hardness tester. Details are set forth in Appendices A, B & C to this report.

The 29 items of the B & V 155 airplane were tagged as indicated in Appendix A. Exact shipping instructions as to destination of the aircraft were to be supplied by P/L Littlefield. Each of the 50 boxes of data were marked in paint as follows:

To: ADI (K) Air Ministry  
For: CIOS Secretariat  
Attn: Major Avison  
U.S.Embassy - 40 Berkeley Square

From: CIOS Target No.25/3  
Date: 14th June 1945

Col. W. A. Shuping: Leader  
U.S.Embassy  
40 Berkeley Square, London.

also, each box was marked with box number.

Aeronautical Material and Equipment Remaining at Blohm & Voss, Finkenwärder which may be of interest to others

The following interesting material and equipment remains at Blohm & Voss, Finkenwärder :

Model BV-155, High Altitude Fighter

Misc.negatives of Production Illustration BV-155  
(perspective)

1 Fuselage, in jig approx. 75% complete	BV-155-B
1 Tail Wheel shock strut and fork	BV-155-B
1 Fuselage - welded structure, also jig	BV-155-C
Outer wing panel jigs	BV-155-B and C
1 Mock-up	BV-155-C
5 Engines	Spares for BV-155-B or C.

Model BV-222 - 45 Ton Flying Boat

- 1 Set ink and pencil tracings - assemblies and details
- 1 Hull, complete with controls and wiring.
- 1 Show model.

Model BV-238 - 90 Ton Flying Boat

1 Hull under construction

Model BV-246 - Gliding Bomb

1 Glide Bomb - not loaded and less steering mechanism

Approx. 150 Bombs (war heads), mostly loaded with sand for tests.

Model I-11 - Torpedo.

1 Release Control for I-11 Flying Torpedo

Releases torpedo from winged container at predetermined height above water.

Model BV-138 - Seaplane - trimotor (obsolete)

1 Set pencil tracings - assemblies and details.

1 or 2 Show Models

Model BV-144 - Breguet Commercial Model

1 Set pencil tracings - assemblies and details

Miscellaneous

Approx. 50 Me-109 fuselages - were being converted to 2 place.

1 Wind Tunnel complete with scales, etc.

1 Smoke Tunnel

Static Test Lab.

Complete Inspection Lab. 100% intact - complete with all electrical testing apparatus, precision measuring tools, snap gauges, thread gauges, etc. located in Bomb cellar.

Summary

Duration of trip - 20 days. Targets covered:  
39. The team returned to London, June 18, 1945.

W. A. Shuping

W. A. Shuping, Group Leader  
Fairchild Engine & Aircraft Corporation

Lee Worley

Lee Worley  
Fairchild Engine & Aircraft Corporation

Richard H. Depew Jr.

Richard H. Depew Jr.  
Fairchild Engine & Aircraft Corporation

## APPENDIX A

Blohm & Voss  
Hamburg-Finkenwärder

June 15, 1945

### B & V - High-Altitude Fighter 155

#### List of assemblies tagged:

1. Fuselage and tail assembly including engine
2. Bottom fuselage cowl
3. Bottom fuselage cowl
4. Small part of fuselage side
5. Pipe clamp
6. Blower outlet
7. Turbo supercharger
8. Top fuselage cowl
9. Tail wheel and tire
10. Pilot seat
11. Small piece of cowl
12. Propeller hub
- 13, 14, 15, 16. Propeller blades.
17. Propeller blade clamps - 8 pieces
18. Center section wing assembly, with landing gear, flaps and radiators.
19. Right outboard wing panel and aileron.
20. Left " " " " "
21. Right and left wing tips (left unfinished).
22. Right radiator shutter and cowl (left installed on center section wing).
23. Miscellaneous wing fillets and cover plates.
24. Right top radiator cover (left installed on center section wing)
25. Propeller spinner
26. " " back plate.
27. Cannon - 20 mm
28. " " "
29. Spare engine - Daimler-Benz 603-U.

All above items are tagged as follows:

From C.I.O.S. Target No. 25/3

Date: 14th June 1945

Col. W.A. Shaping, Leader

U.S. Embassy

40 Berkeley Sq., London.

APPENDIX A

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and on reverse side:

Notify Major Avison  
U.S. Embassy  
40 Berkeley Sq., London.

Shipping address is to be supplied by  
F/L E. A. Littlefield, R.A.F.

C.I.O.S. TRIP 330.

by Richard H. Depew Jr.

-3d-

## APPENDIX D

Firms furnishing aircraft components ("Purchased Parts") to BLOHM & VOSS, FINKENWARDER, for their various models

KROMPRINTZ SCLINGEN, OLIGS	Supplying: Under-carriages
DAIMLER BENZ BERLIN, MARIENFELDE	" 603 "U" Engine
HIRTH STUTT GART	" Turbo Super Chargers
ESKANTIA BERLIN	" Instruments
BEHR STUTT GART	" Radiators
SCHWARZ BERLIN	" Airscrew-blades
V.D.M. FRANKFURT	" Airscrew-hubs
ARMATUREN APARATE FABRIK BERLIN, GNEISENAUSTR.27	" Nuts and bolts
ZSCHOPAU WERK D.K.W.	" Electro Generators
BOSCH STUTT GART (FABRIK) VERKAUFSHAUS BERLIN/SCHARLOTTENBURG	" Electrical Equipment
CYCLIO GETRIEBE BAU LORENZ BRAREN MUNCHEN 2 DACHAUER STR.114	Supplying Flexible drive cable.
DEUTSCHE BENZINHUEREN G.M.B.H.(D.B.U.) BERLIN S.W.29 BERGMANN STR.102	Supplying: Fuel pumps.

APPENDIX B

-2-

NEUE EFFZETT, MOTORENFABRIK OTTO KUNTZE  
BERLIN/RUMMELSDURG  
HAUPTSTRASSE 5.      Supplying: De-icing for  
Air-screws

PIRMA PATIN  
BERLIN W.35.  
WOYRSCH STRASSE 13      "      Automatic Pilots

RASPE WERKE G.M.B.H.  
BERLIN/WESENSEE  
BERLINER ALLE 107/110      "      Bullet proof  
fuel tanks

H. WALTER  
WERK KIEL  
ZEYER STRASSE 2a      "      Equipment for  
Rocket assisted  
Take-off.

-40-

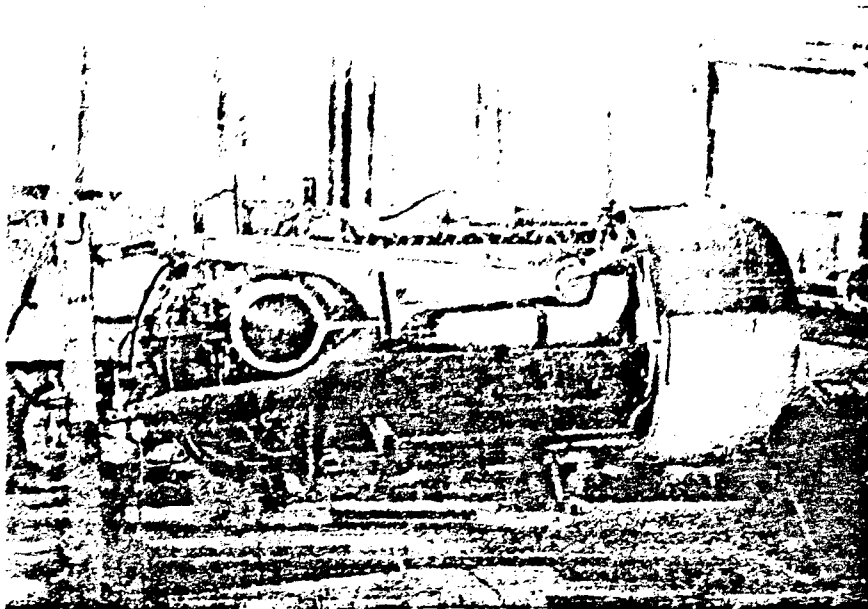
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APPENDIX C

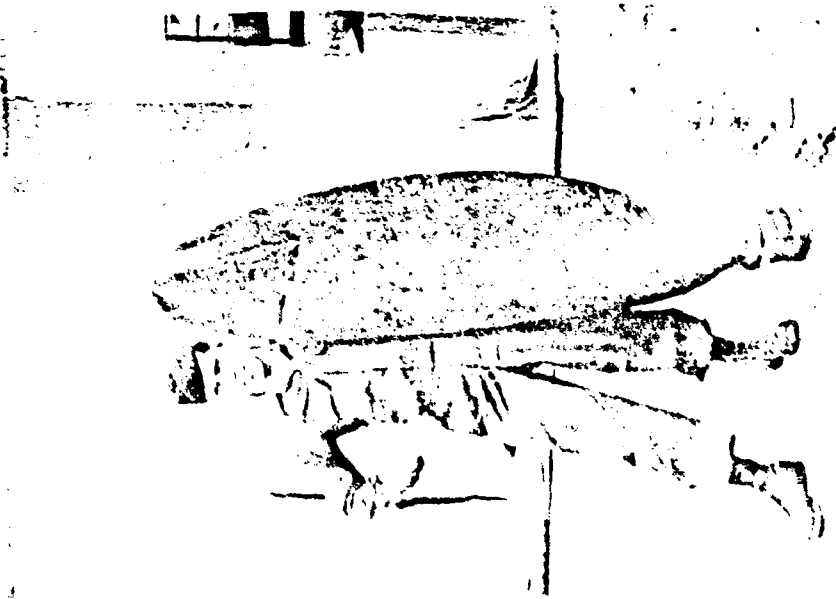
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Detachable power plant for FW-190.  
Note forged engine mounting. Bomb blast  
protection barrier in background.

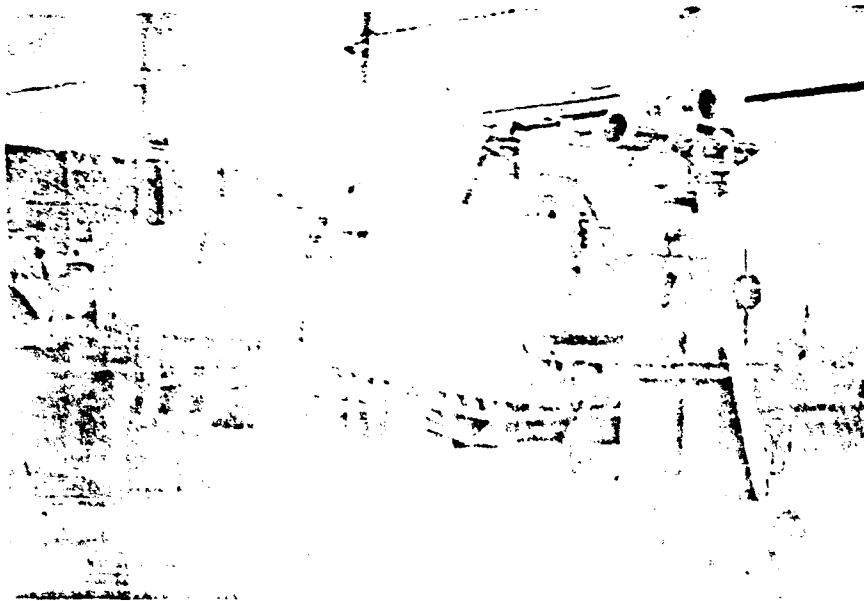


Wood propeller blade, used on FW-190.  
Note the forged engine mounting.  
Detachable power plant.

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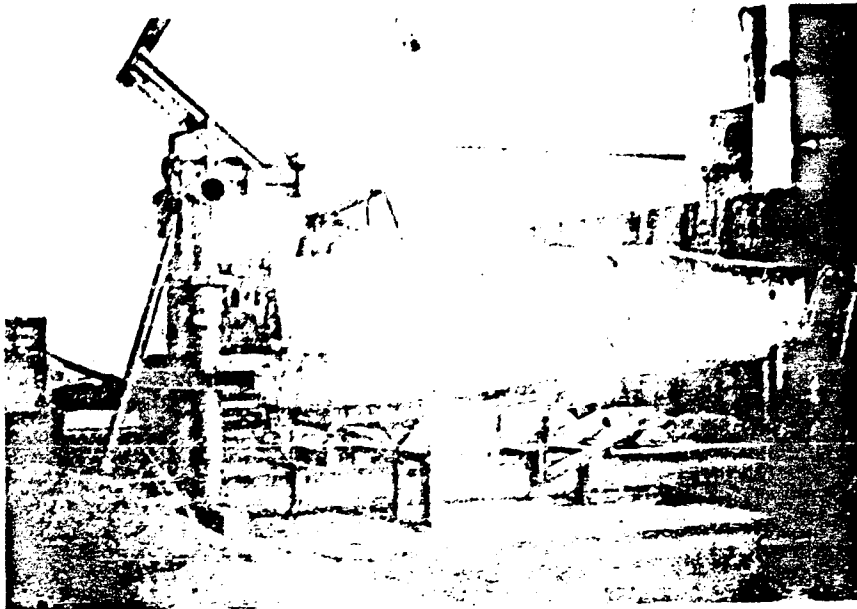


FW-190. Detail of aileron, using forged dural on Elektron (magnesium) edge.



Typical J12 - FW-190 fuselage.

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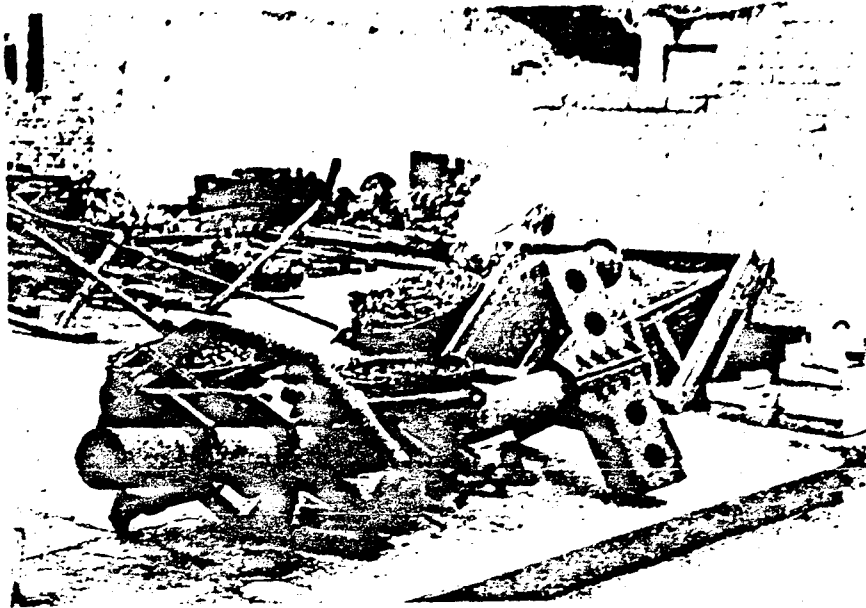


Typical Jig - Fw-190 fuselage.

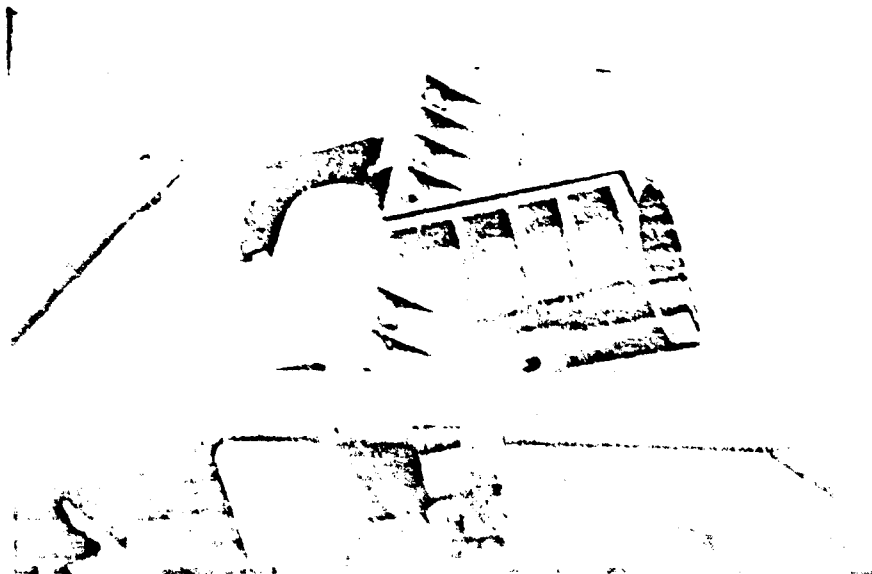


Typical Jig used for the construction of the fuselage.

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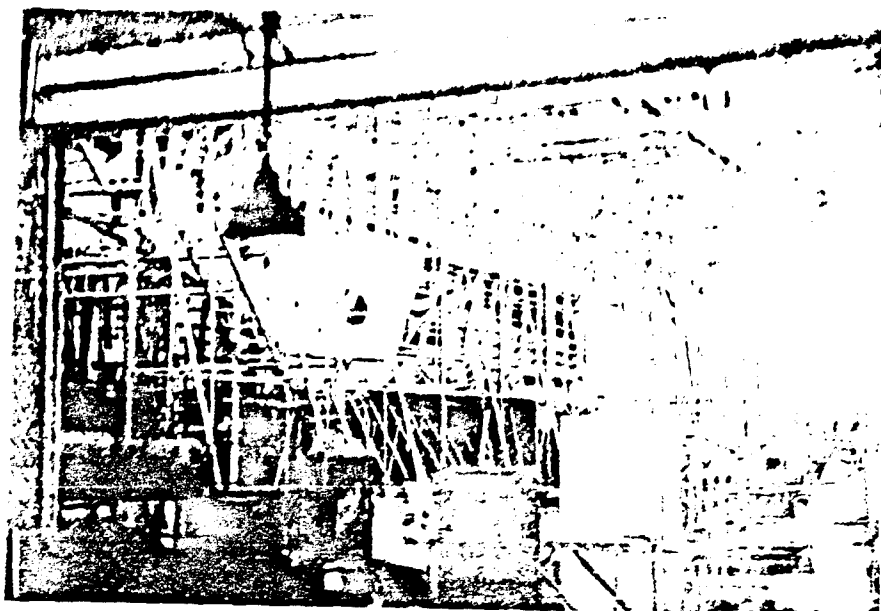


Damaged Jig, showing standardized construction.

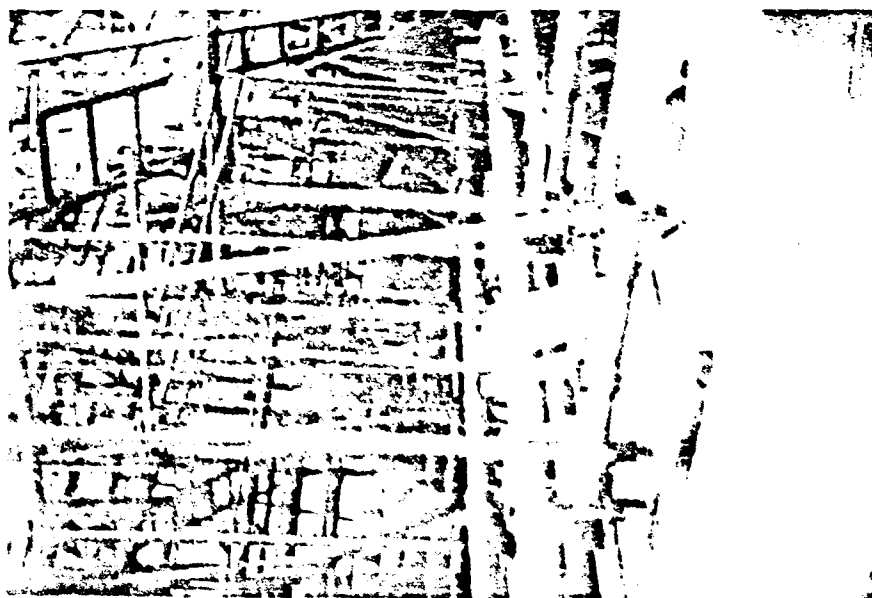


Standard of Jig Construction.  
Detail of chain fitting.

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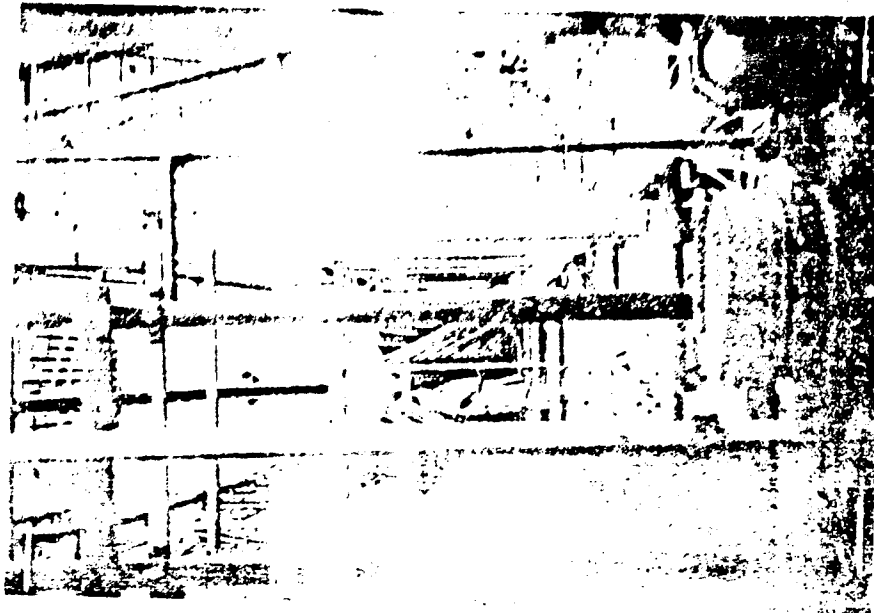


Typical very large Jig Construction.  
Blohm & Voss 238 90-ton Flying Boat.

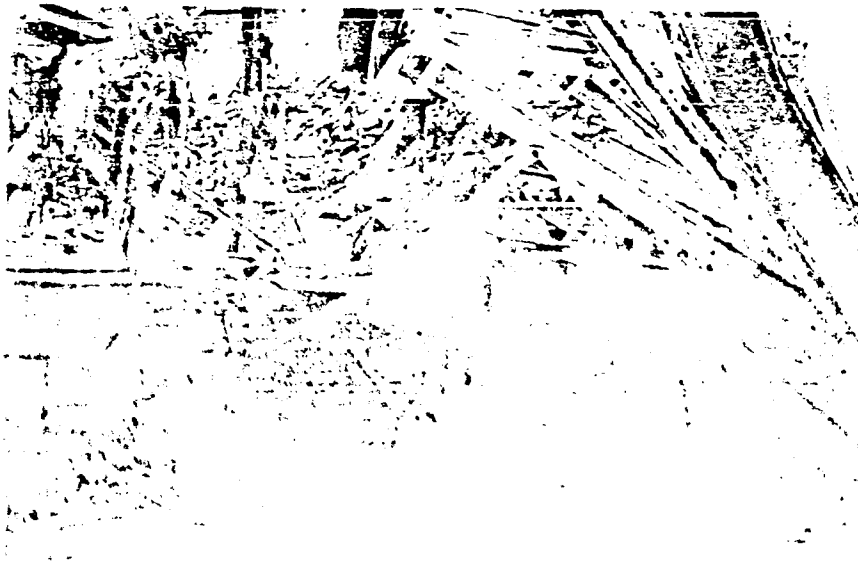


Detail of Hull of Blohm & Voss 90-ton  
Flying Boat.

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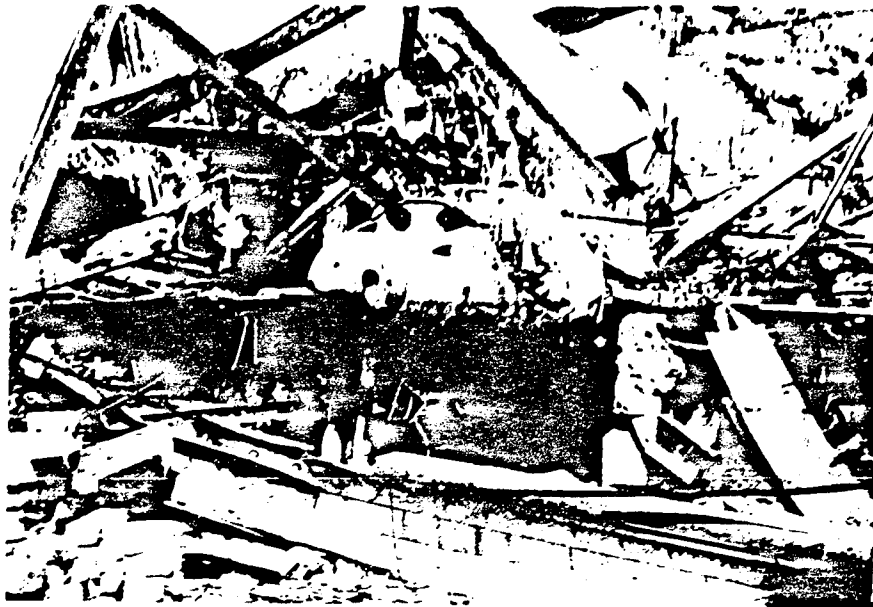


Blohm & Voss 238 90-ton Flying Boat.  
In Jig.

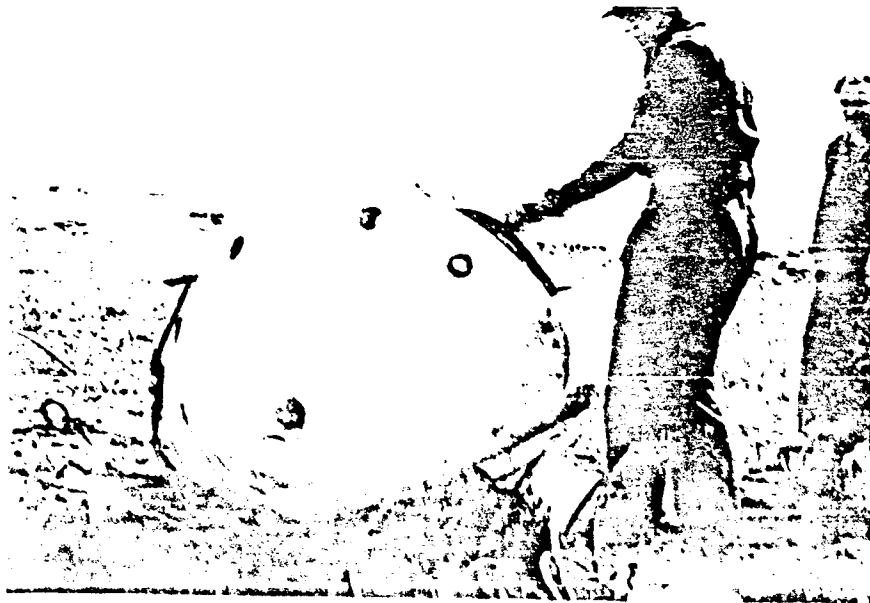


Vostok, twin jet fighter - 1,000 mph.  
Gorodok Airfield.

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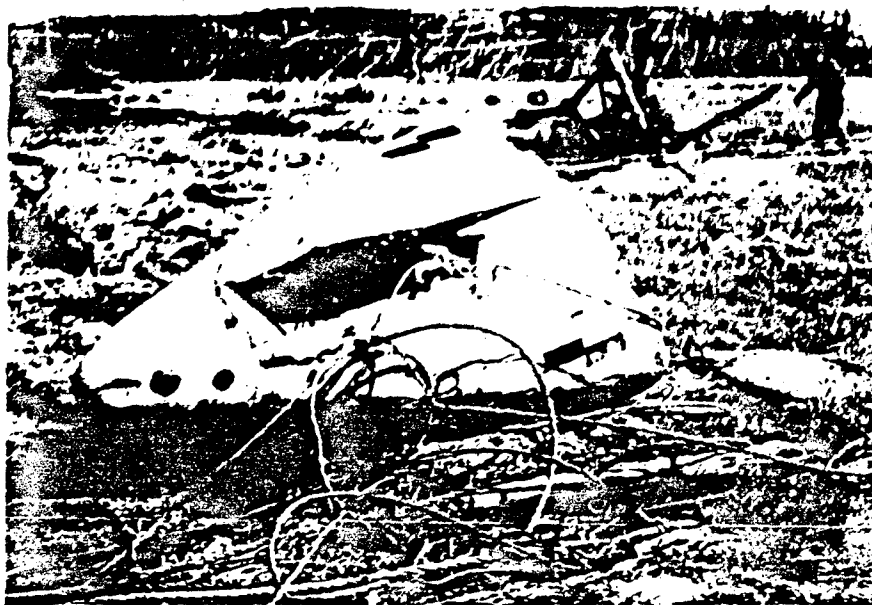


Me-262 twin-jet fighter, less engines  
Wenzendorf Airfield.

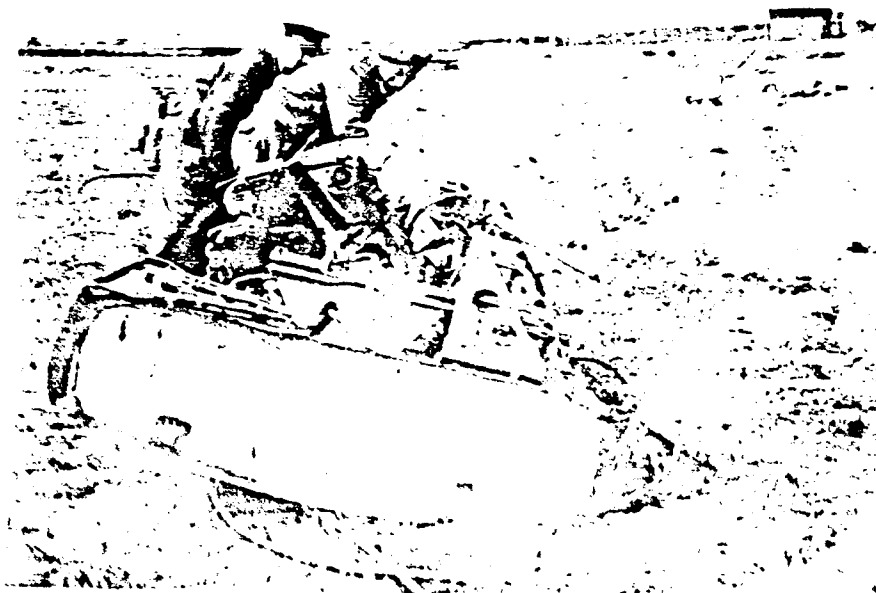


None for Me-262. Wenzendorf Airfield.

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Me-262 nose. Wenzendorf Airfield.



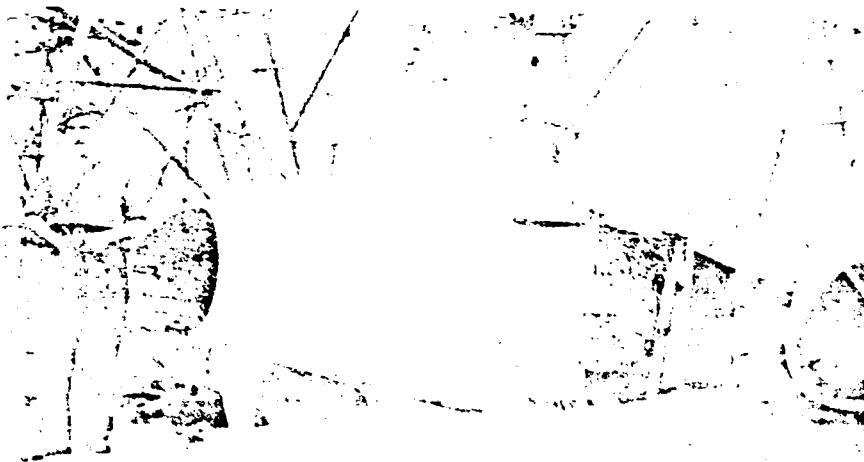
Me-262 nose. - Looking forward  
Wenzendorf Airfield.



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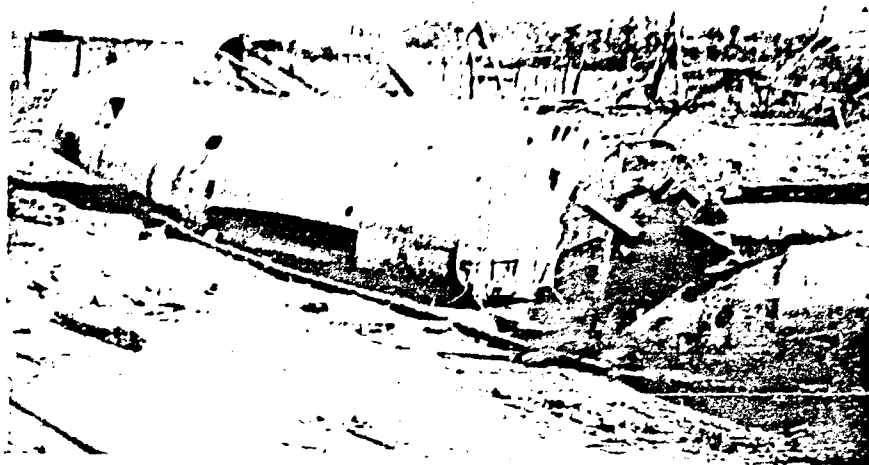


Me-262 fuselage - Wenzendorf Airfield.



Me-262 fuselage - bottom view.  
Wenzendorf Airfield.

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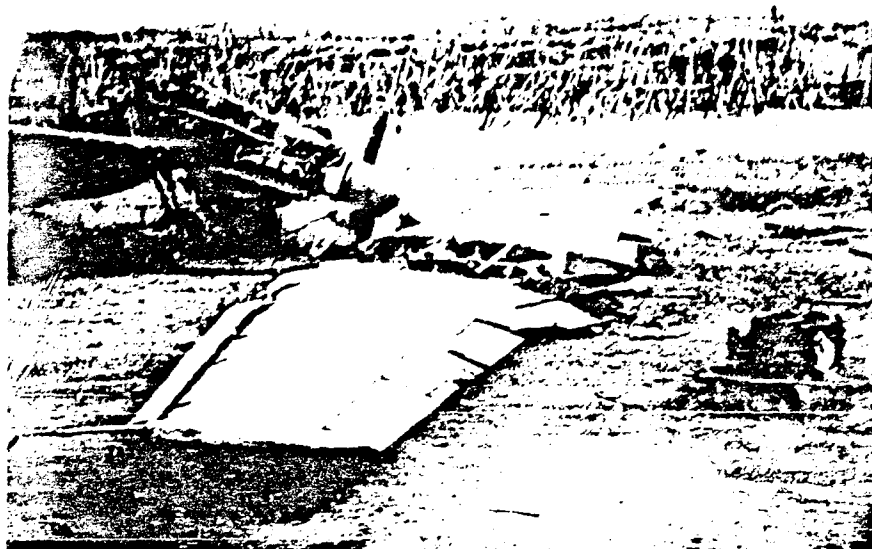


Me-262, two-seater conversion for training  
on jet planes. Wenzendorf Airfield.

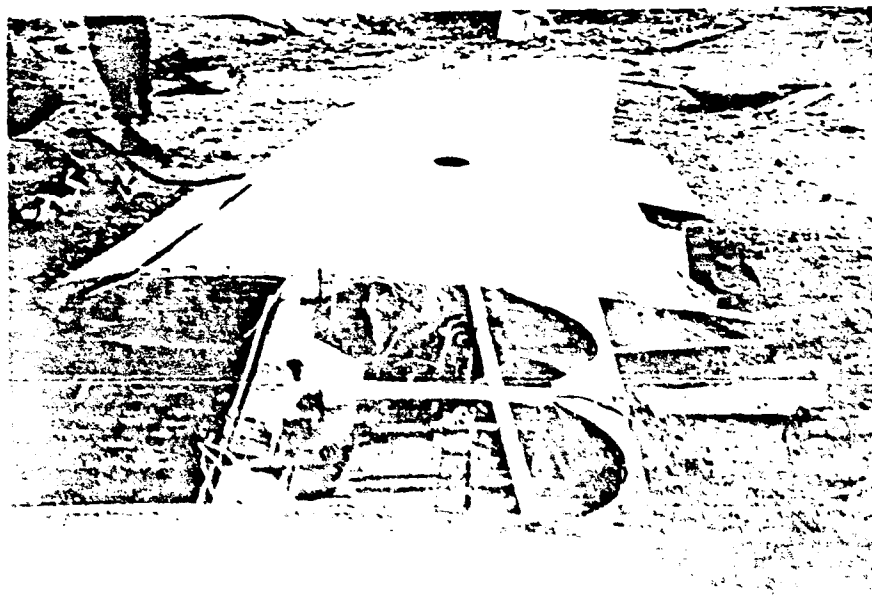


Me-262, two-seater conversion for training  
on jet planes. Wenzendorf Airfield.

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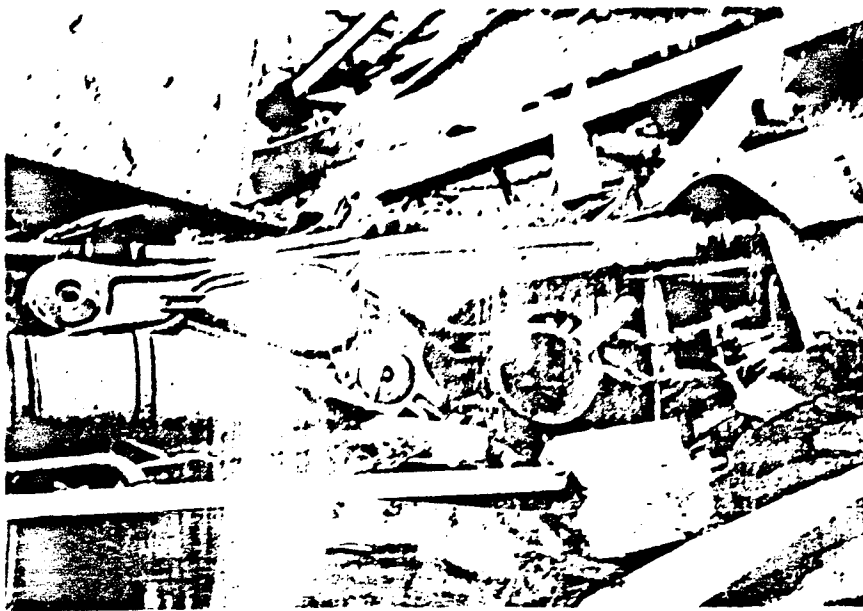


Wing for Me-262 twin-jet fighter  
Wenzendorf Airfield.



Wing for Me-262, twin jet fighter.  
Wenzendorf Airfield, Germany.

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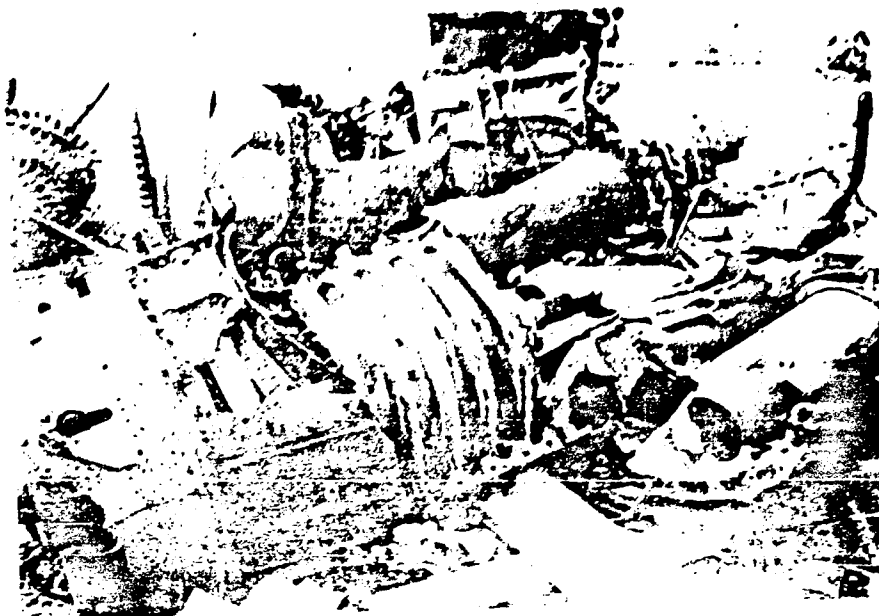


Me-109. Detail of forged engine mount.

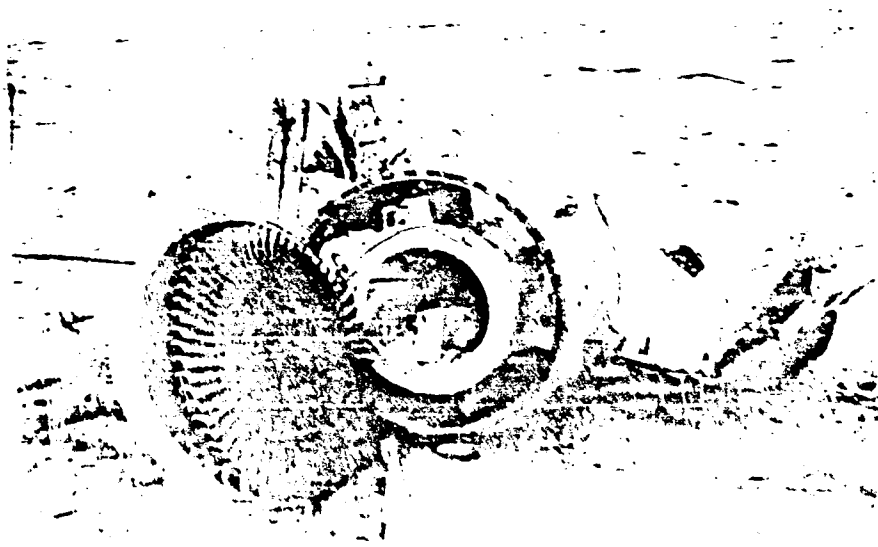


Me-109. Detail of forged engine mount.

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Jet engine - damaged by bombing.  
Wenzendorf Airfield.



Jet engine - damaged by bombing.  
Wenzendorf Airfield.

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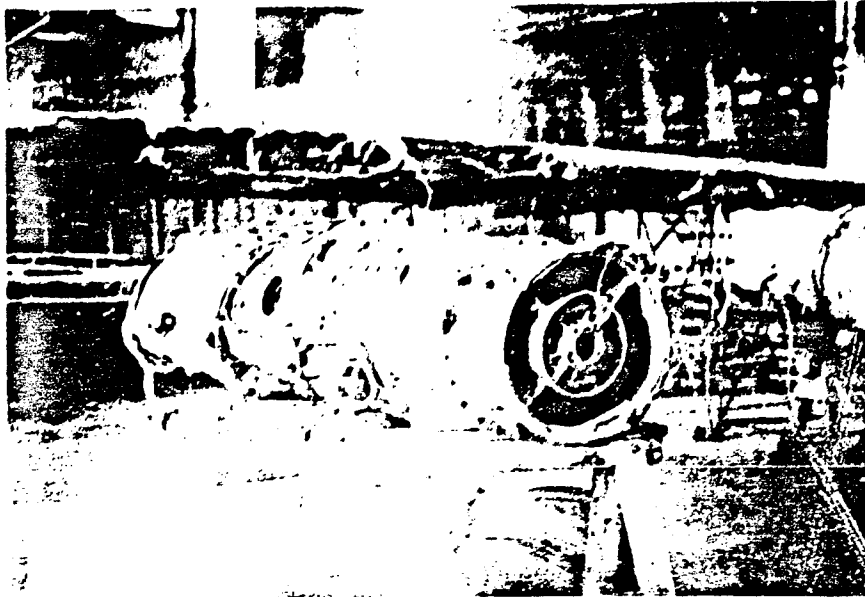


Jet engine - damaged by bombing.  
Wenzendorf Airfield.

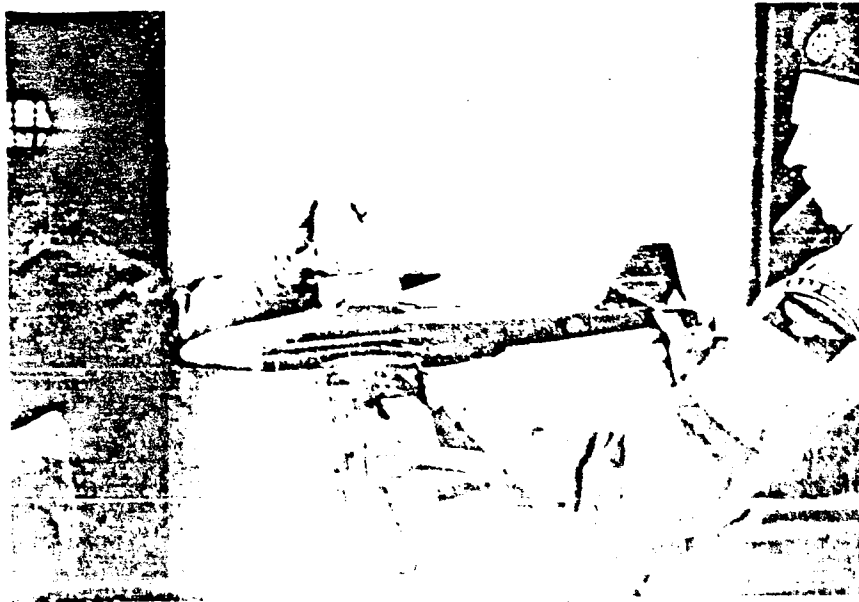


Jet engine - damaged by bombing.  
Wenzendorf Airfield.

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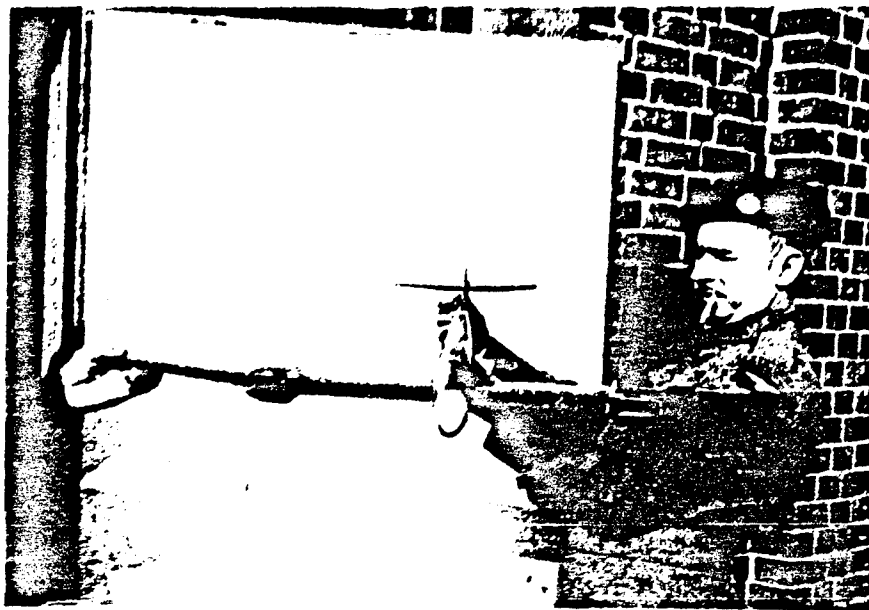


Damaged jet engine and wing for  
Arado plane. Weser Flug. Einswarden.

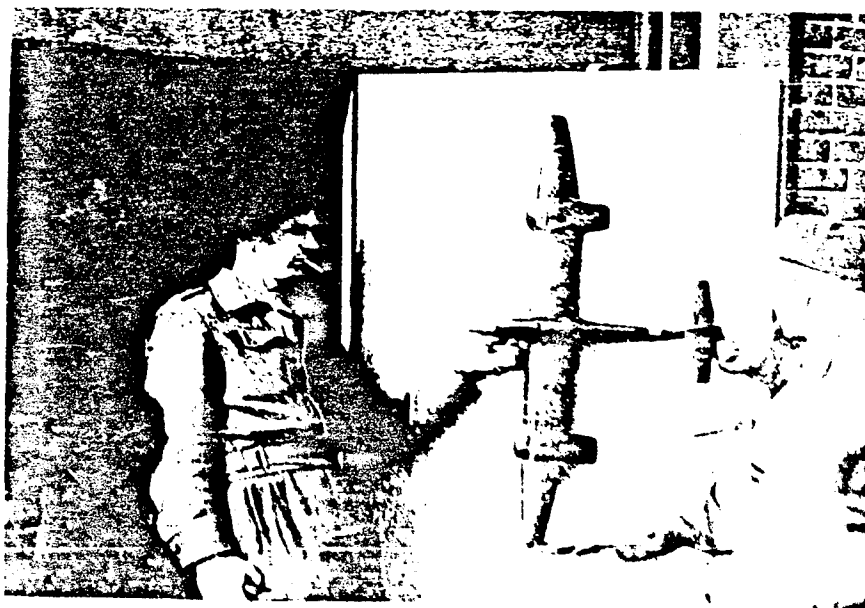


John ...  
...  
...

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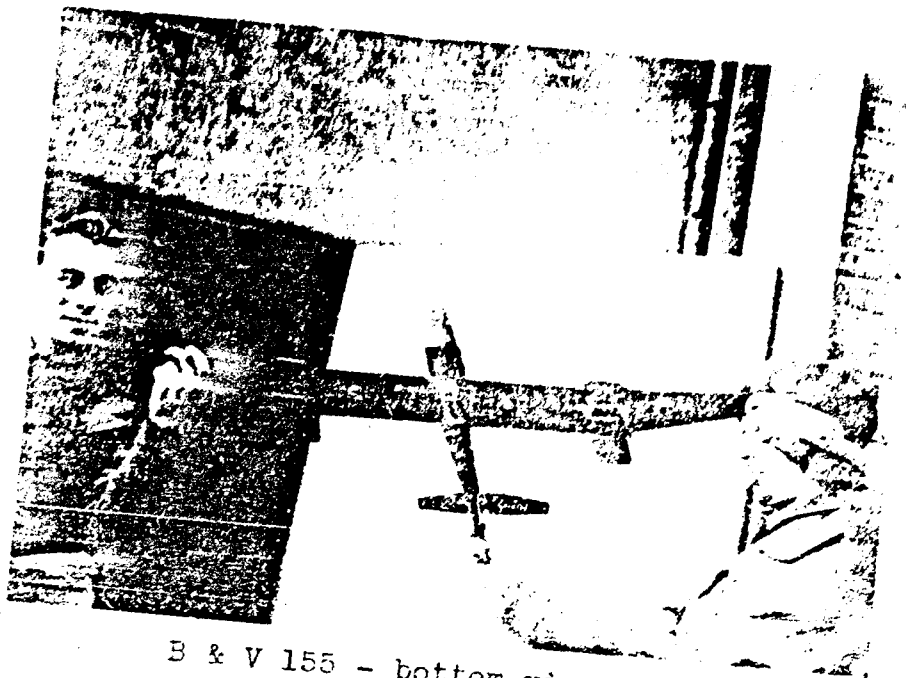
B & V 155 - front view.



B & V 155 - top view.



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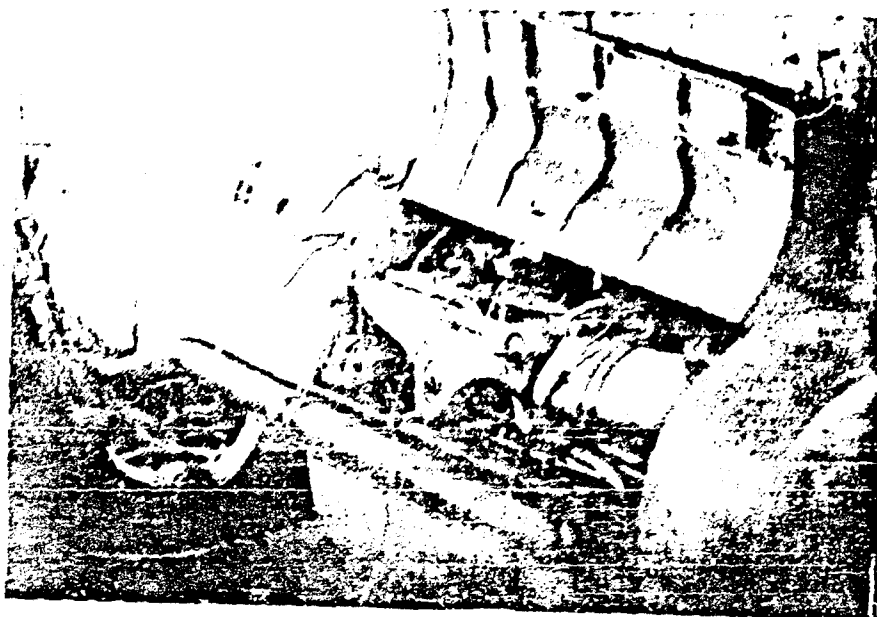


B & V 155 - bottom view.

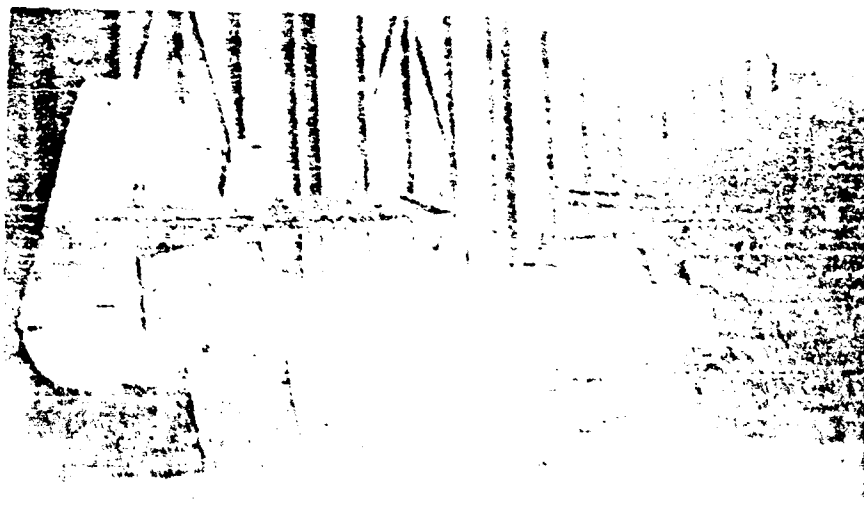


B & V 155 - front view.

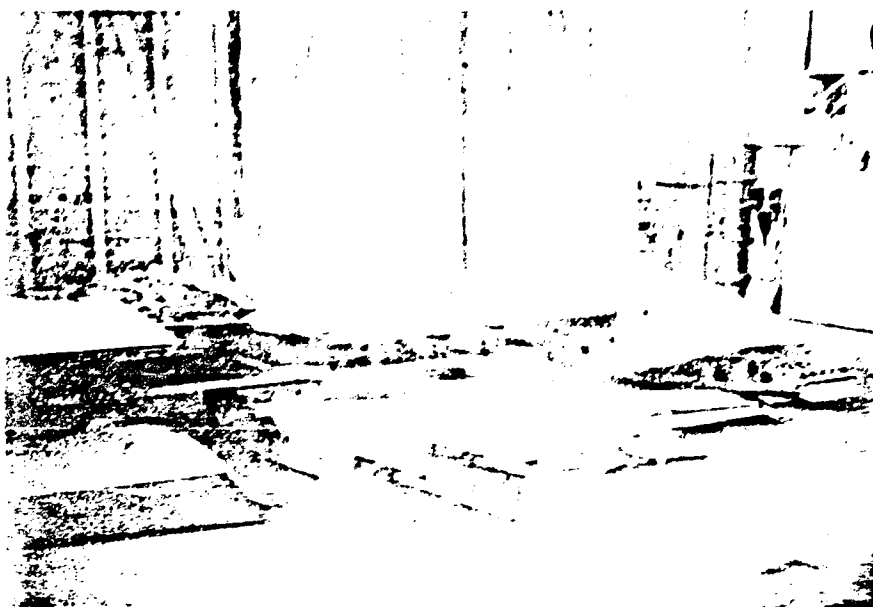
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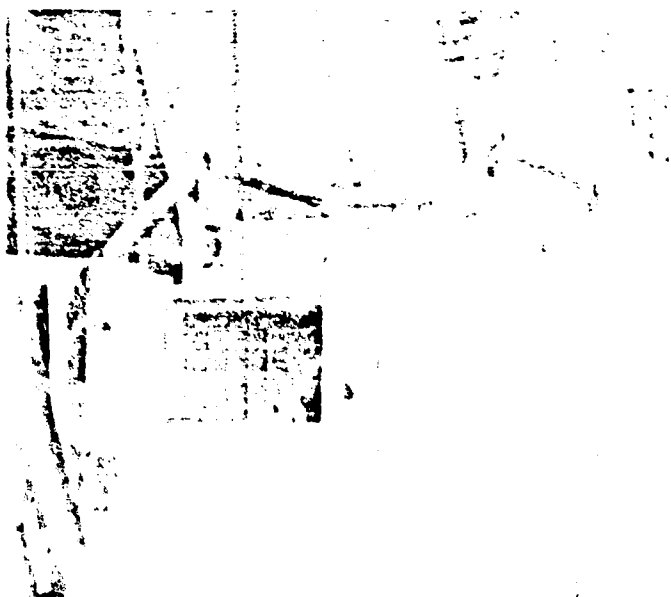
Blohm & Voss - Finkenwärder. B & V 155 -  
High Altitude Fighter; showing exhaust  
pipe to turbo supercharger.



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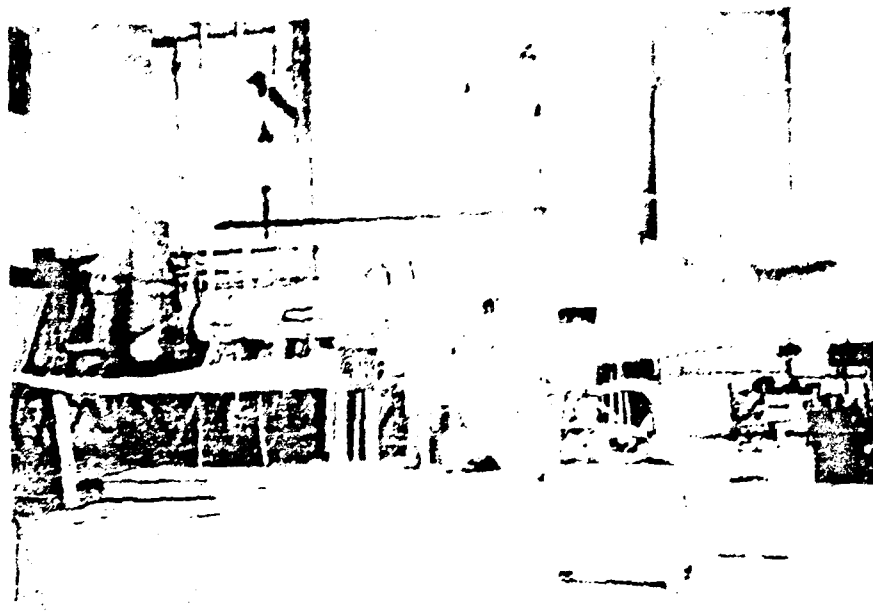


B & V 155 Fighter, Center section, showing  
intercooler, outer wing panels, 20 mm cannon.

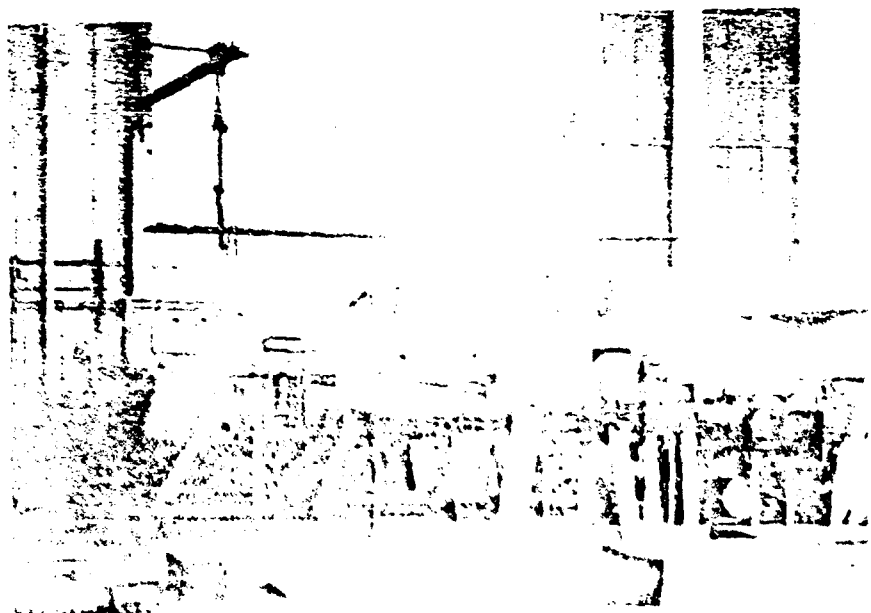


B & V 155 Fighter. Pilot's cockpit  
section of fuselage.

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Mahn & Voss - Rinkenwärdner.  
Mock-up, B & V 155-C fighter.

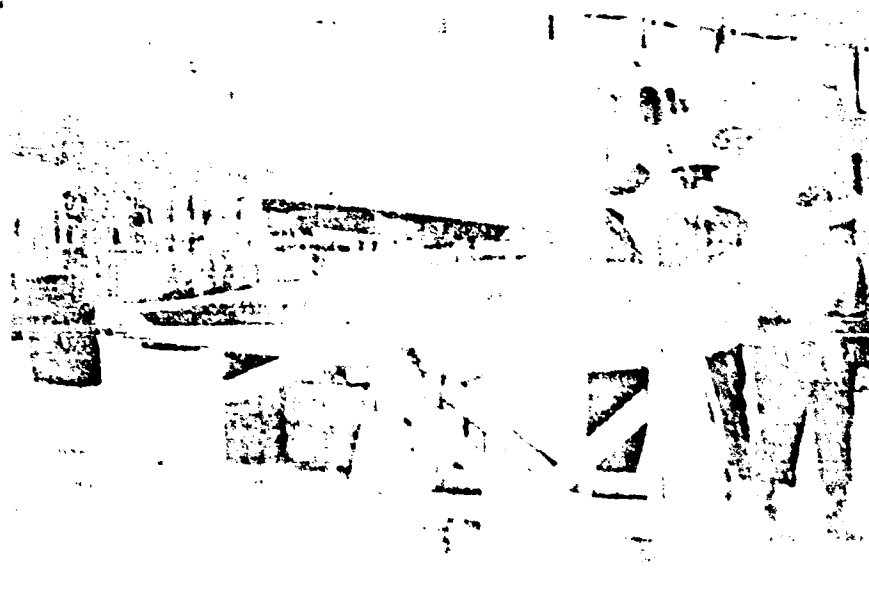


Mahn & Voss - Rinkenwärdner. Mock-up of  
B & V 155-C fighter. Note: information  
in box on right.

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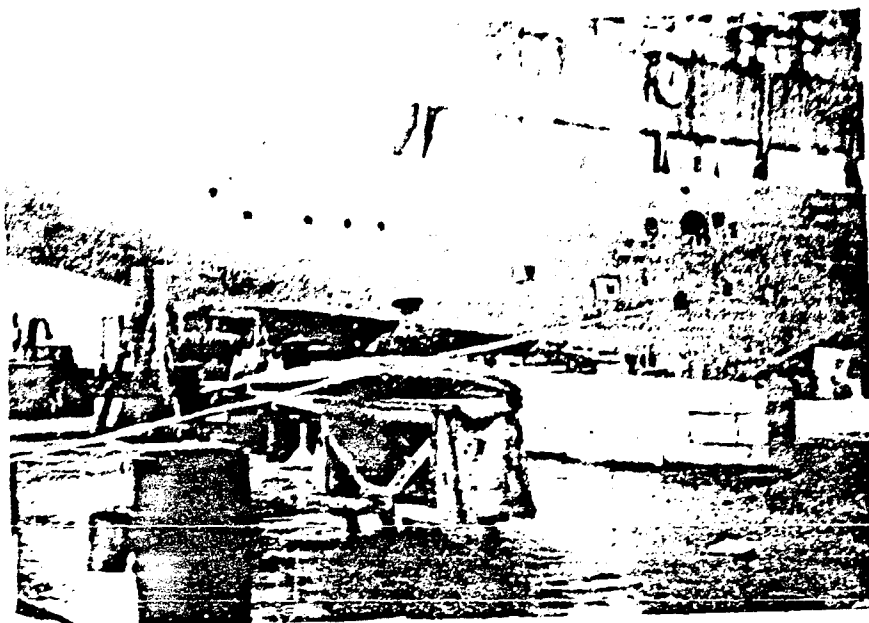


Blohm & Voss - Finkenwärder.  
B & V 246 glide bomb.

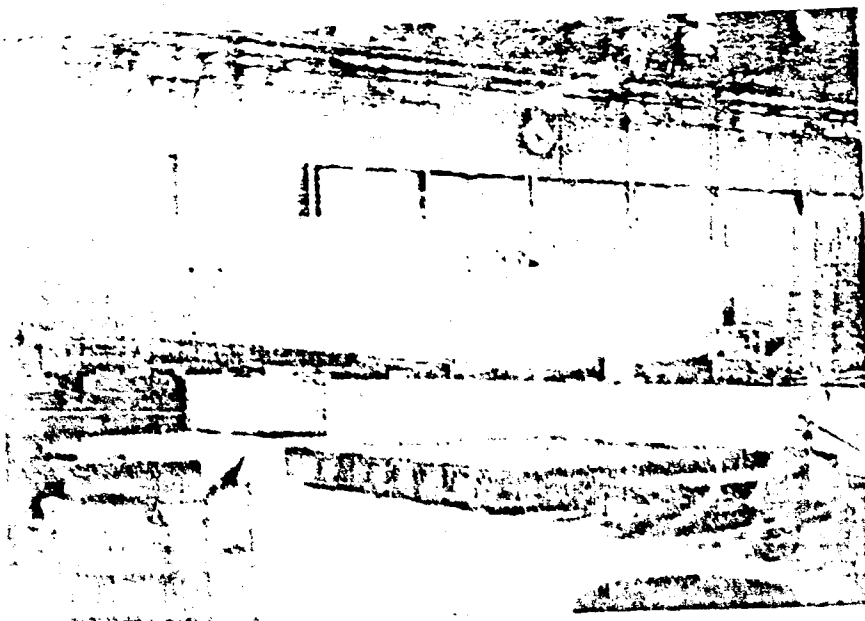


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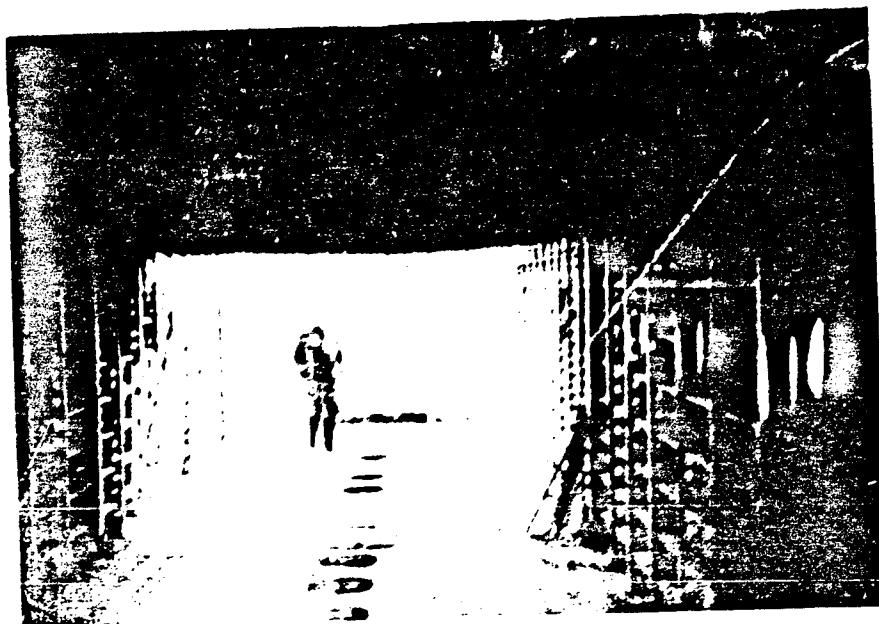


Blohm & Voss - Finkenwärder. B & V 246  
glide bomb. In background B & V 222  
flying boat - 45 tons.

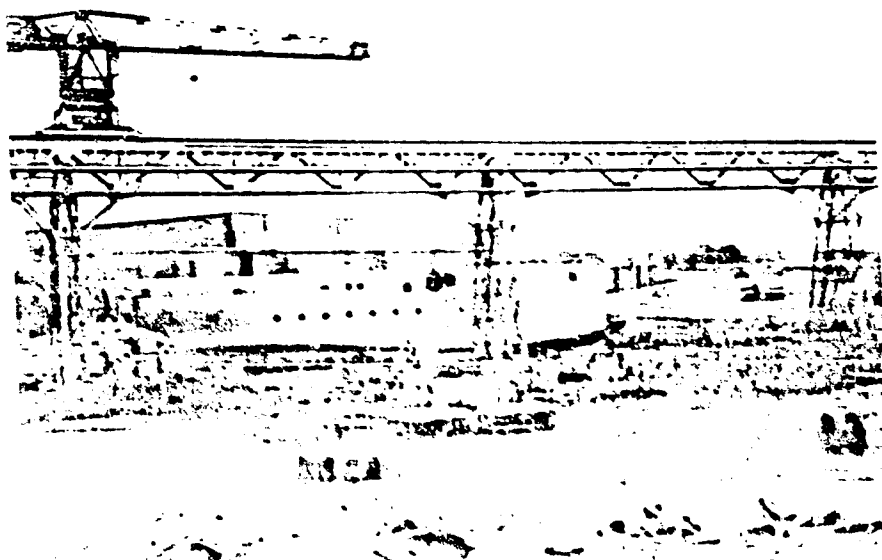


Blohm & Voss - Finkenwärder.  
glide bomb. In background B & V 222  
flying boat - 45 tons.

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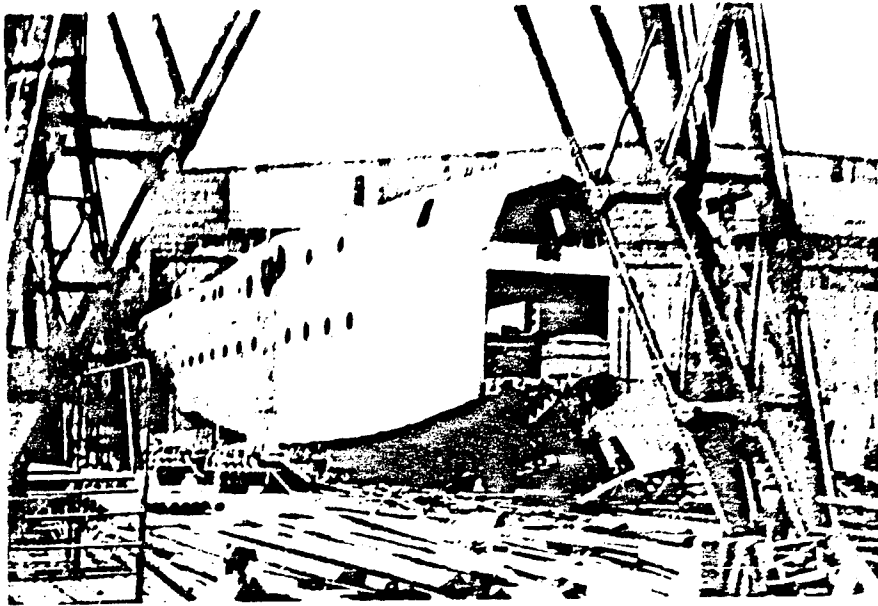


Blohm & Voss - Finkenwärder. B & V 222  
flying boat - 45 tons. Interior of lower  
deck, looking forward.



Construction of Blohm & Voss flying boat B & V 222.  
Finkenwärder, Hamburg.

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Weser Flug. Einswaren.  
B & V 238 flying boat - 90 tons.



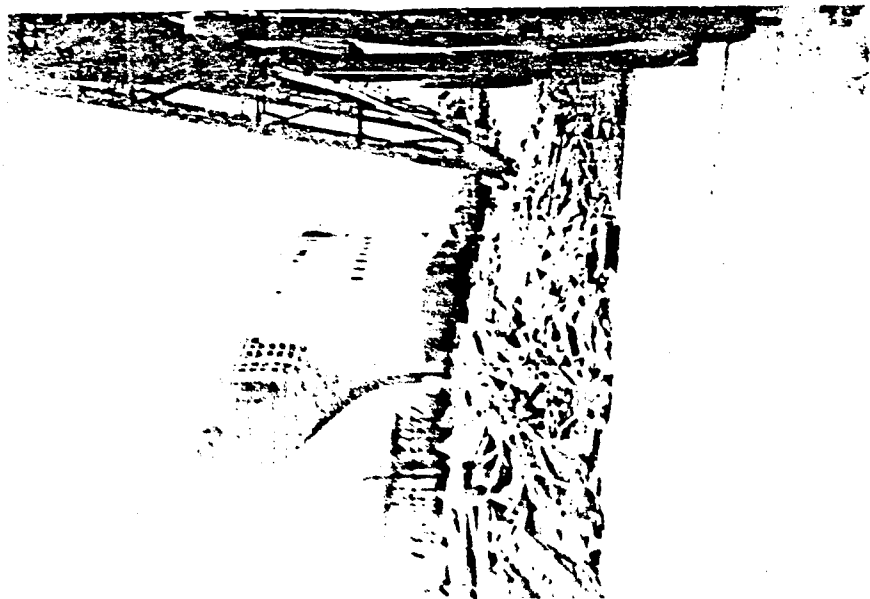
Weser Flug. - Einswaren.  
Flying boat - 90 tons. (Photo taken from  
nearby through rail.)



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Weser Flug. - Einsparien.  
B & V 238 flying boat - 90 tons.



Weser Flug. - Einsparien.  
B & V 238 flying boat - 90 tons.

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Blohm & Voss - Finkenwärder. B & V 239  
Flying boat - 20 tons. In hull jig.

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